URBANISATION IN ANCIENT TAMILNADU
FROM 3rd CENTURY B.C. TO 4th CENTURY A.D.

THESIS SUBMITTED TO THE BHARATHIAR UNIVERSITY

FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

by

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CERTIFICATE

This is to certify that the thesis, entitled **Urbanisation in Ancient Tamilnadu** From 3rd Century B.C. to 4th Century A.D. is a record of original research work done by **S.Manimegalai** in the Department of **History** as a **full time** Research Scholar during the period of study **1-11-91 to 31-10-98** under my guidance and supervision for the award of the Degree of Doctor of Philosophy in **History**. I further certify that this research work has not previously formed the basis for the award of any other Degree or Diploma or Associateship or Fellowship or other similar title to any candidate for this or any other University.

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DECLARATION

I do hereby declare that the thesis entitled **Urbanisation in Ancient Tamilnadu** (**From 3rd Century B.C. to 4th Century A.D.**) submitted to Bharathiyar University, Coimbatore, for the award of the Degree of Doctor of Philosophy in **History**, is a record of original and independent research work done by me during **1-11-1991 to 31-10-98** under the supervision and guidance of **Dr.P.Muniratham Chetty** and it has not previously formed the basis for the award of any Degree, Diploma, Associateship, Fellowship or other similar title to any candidate of any University.

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Abbreviations

ARE	-	Annual Report on South Indian Epigraphy.
DED(R)	-	Dravidian Etymological Dictionary (Revised)
Ed	-	Editor
EI	-	Epigraphica Indica
FN	-	Foot Note
Ibid	-	Ibidem (in the same place)
Loc.cit	-	Loco Citato. (In the same place cited)
n.d	-	no date
Op.cit	-	Opera Citato (In the work cited quoted)
OUP	-	Oxford University press
P	-	Page
P.P	-	Pages
S.I..I	-	South Indian Inscriptions.
Vol	-	Volume.

CONTENTS

INTRODUCTION

INTRODUCTION

Since seventies other aspects of history (other than political history) have been emphasised in Indian historiography. Among these aspects trade and urbanisation have been discussed seriously by the Indian historians. Recently Irfan Habib and Thapan Raychaudhri have edited two volumes which have been published as 'Economic History of India'[1]. R.S.Sharma has published a book titled as 'Urban Decay in Ancient India'[2]. Himanshu Prabha Ray has worked on the problem which related to trade, urbanisation and emergence of Kingship in Deccan during Sathavahana period [3]. Shereen Rtanagar had published her doctrol dissertation which has discussed about Harappan Trade with West Asia[4]. Maloney worked 'The effect of Early Coastal Sea Traffic on the Development of Civilization in South India' which has been submitted in the sixties for Doctor of Philosophy [5]. In foregoing three decades many data have been collected in Tamil country about trade and urbanisation which are not throughly processed by South Indian historians. Barring R.Champakalakshmi and B.D. Chattopadhyaya no other scholar worked upon these data [6]. Even these two scholars have only initiated the debate. Hence we have to analyse trade and urbanisation in ancient Tamilnadu with new data and correct historical prespectives.

Trade has been playing an important role with the mankind from the begining of barbarianism up to the civilisation. It can be said that trade entered in the life of man by the exchange of gifts. Man had a tendency to give off, while seeing a person, what was surplus in him. In course of time it became what was known as trade. Trade has been defined as 'the mutually appropriative movements of goods between hands. This movements may be within contiguous social units (internal trade) or between groups across clutural boundaries(external trade)'. Himanshu Prabha Ray categoried this into 'gift trade', 'administered trade'and 'market trade'[7]. The first is based on a reciprocal relationship between parties, while the second type can take place only in the case of a formal treaty. The third type of market trade follows the line traced out by the supply, demand -price mechanism.

The exchanges were based on the use of vlaue of goods and there is no indication of the notion of exchange value being involved in the transactions even of specialist goods. Poems refer to a kind of loan of commodities (Kuriyefirpai) which was to be paid back in the same kind and quantity [8]. The concept of profit or interest seems to have been more or less irrelevant in contemporary modes of transactions. Probably the only difference was that the goods were predominently gold and silver. The coins could not have been circulated as money in the existing modes of exchange, but only as a category of valuables. The

procurement of goods for trade crosses the barriers - geographical and political and it is difficult to draw boundary lines.

In the study of urban processes, another useful distinction is that of primary and secondary urbanization. In primary urbanisation the rise of cities is solely the result of internal developments, although not in a complete isolation, for external influence in varying degrees could induce such development as in Shang China and to some extent in Mesopotomia and in Central America. Secondly urbanization is the direct outgrowth of the expansion of empire, wherein forts and regional administrative centres, established for political and economic control, could act as centres of diffusion of metropolitian culture, i.e, technology and other knowledge [9].

The ceremonial complex receives central importance in the emergence of urban forms and in shaping of pro-modern(pre-industrial) cities in studies on urban historical geography. Religion does not mean the mere existence of beliefs in the other world and cultural practices which admitedly precede urban beginings . It is that point of development in which a formalised system of beliefs and practices , ~~with~~ which claims to universalism, plays a significant part in the process of transformation, requiring mediation through workship and sacrifice ie, through institutional means and enables a certain politico-religious elite to command priority

and exercise authority[10]. As Eisenstadt points out in the progression of ~~various~~ urbanisation led to a metamorphosis of the older kin-structured tribal organization into a class based one-such as the temple, foress or market place. In south India such a change may be perceived from the early historical urbanism to the early medieval urbanism, the early medieval temple assuming the institutional focus.

Three major periods of urbanisation have been identified in pre-medieval (pre-sultanate) India [11]. The first is represented by the proto - historic cities of the Harappan/Indusvalley culture assigniable to a long period from the middle of the thrid millennium to the middle of the second millennium B.C. the urban character of this phase is recognizable in a hierarchy of settlement sites, in the planned cities, in the urban infrastructure provided at Mohenjodar, their design monumental architecture and orientation, apart from other significant archacological evidence. The major part of the subcontinent remained unaffected by this early urbanism, which, in fact, left no legacy beyond the middle of the second millennium B.C.

The second period of urbanism, the epicentre of which is located in the Ganges valley, was spread over a long period from the middle of the first millennium B.C. to the third century A.D. and is often attributed to the maturity of the iron age and the expansion of trade

within the Ganges valley and from the Ganges valley to other parts of India, covering almost the whole of the subcontinent. More significant in peninsular India was the impact of maritime trade. Regional variations in this phase of urbanism are crucial to an understanding of the degree and intensity of secondary urban forms in Tamilakam, where the impact of Indo-Roman trade was ~~greater~~ felt much and the influcence of Mauryan polity was minimal.

For peninsular India, this phase represents the first urbanisation, which is better understood through regional and sub-regional studies, although commonalties may exist across regions. Only a beginning has been made in this direction, i.e. ~~in the~~ an undertake~~n~~ing based on such an approach. For, Tamilnadu in the early historical period, the study of settlement patterns, ecology and forms of production has demonstrated the need for such an approach and provided useful insights into the nature of economy and urban forms.

In the early historical period, urban forms emerged in restricted zones, urban enclaves in two eco-zones, viz, the marutam (plains) and neital /coast/littoral) in the form of consumption points and trading points[12]. Some transit zones like the semi-arid kongu region, rich in mineral resources, acted not only as ~~route areas~~ trade routes areas (buffer state) but also as craft production enclaves. This early urbanism was not the result

of the forces of an inner growth but was of a secondary generation induced by inter - regional trade mainly coastal, between the ganges plains, Andhra and Tamil regions and overland between the deccan and Tamil region more significantly it was induced by maritime commerce between South India and Mediterranean west and subsequently with Southeast Asia. However, unlike in Sathavahana Deccan, this secondary urban development does not seem to be related to secondary state formation,as Mauryan imperial and cultural influences were less direct than in the Decean and Andhra regions. In other words, political processes were not functionally related to urban genesis, which was mainly the result of external stimules and hence were not at the core of the transformation. Early Tamil society did not emerge fully out of its tribal basis to evolve into a full fledged state-society.

Urban decay, which is believed to be general historical phenomenon in the subcontinent in the post third century A.D. is less clearly attested to in this region both in archacological records and Tamil literary traditions, the latter begin more concered with the decay of urban centres. Nor do they refer to artisans and merchants falling on bad days or to their migration. On the centrary, the post Sangam literary works point to a centres activites in at least the major centres of the early historial period like Kanchi, Vani, and Maduri apart from Kaveripurmpattinam, the major port of entry into the region.

The classical definition for urbanisation of Childe list monumental buildings, large producing classes)including , artisans art, Science and writing as traits of the bronze age. According to Adams, increeased size and density of population are curcial to Urbansim and the centrivution of the context of Iron Age towns in early historic India. But the presence of monumental buildings and the insignificance of crafts do not apply to early historic towns. Heavy rainy moist conditions and perennial floods rule out the presence of large constructions in many reiver plains. Indeed, there has been no view what really ~~marks~~ makes out a town is not meraly size and population but the quality of material life and the nature of occupations. Though agrarion surplus derived from the hinterland is vital to the existence of a town, merely a settlement of non agriculurists cannot be regarded as an urban centre. Concentration of craft and prevalence of money hased exchange are equally important features of urban life. In ~~texts~~ the context of an architecture a `nigama' or town is rightly defined as inhabited by people of all classes and numerous artisan.

The numerical dominance of non agriculturists is the distinctive feature of the urban population. The nature of iron and other artefacts that have been discovered in verticle excavation can provide some clue to them. The artefactural assembleage holds the key to artisanal and other activites.

Artefacts include ~~and~~ not only axes, adzes, chisels, etc, but also crucibles, ovens furnances, dyeing vats, etc. The social and economic implications have to be worked out. ~~Fewer~~ For agricultural ~~But for more~~ important needs importance needs to be given to the absence or the presence of the ploughshare. Towns may have been inhabited by some agriculturists, but their number would not be very large. However as centres for manufactures of iron tools meant to cater to the primary needs of agriculturists, towns are expected to yield such artefacts. But much would depend on luck in verticle diggings.

In a cultural landscape a city is a node, where population chooses to concentrate to create a settlement large and more dense than most other contemporary settlements, not in order to make food production more efficient, but because of an engagement in non-subsistence activities such as crafts or trade, administration or ritual services. (Such population aggregations make defence easier that in situations where people live in dispersed villages). Urban households do not replicate one another in function. It is emphasized to say that urbanism is a dependent variable, the emergence of cities reflects economic change towards specialisation or the division proceeds, the spatial character of an economy will change with certain types of production becoming concentrated at particular settlements.

Many scholars have been working on history of Tamil kings and people. They have solely relied upon literature and few archaeological data which were collected by recently created Archaeology Department. But during three decades archaeology department has unearthern many archaeological data which speak of urbanisation in ancient Tamil nadu. More than twenty urban centres have been unearthed[13]. Among these five are located on the coastal region. With the help of these data we can analyse the development of trade and urbanisation in ancient tamil nadu. In this venture we must analysed the conclusion and theories which are put forth by the pioneers.

In the first half of this century P.T. Srinivasa Iyengar, S.Krishnaswamy Aiyangar. K.N.Sivarjapillai and Kanagasabai Pallai had worked upon the history of ancient of Tamilnadu[14]. Since the Historiography of the south India was in an incipent stage the analyses were incomplete and distorted ones. During seventies very few scholars had worked with correct historical perspectives. With these perspective one can process the archaeological data. Also the conclusions arrived by the pioneers are to be analysed and modified.

The ~~dissertation~~ thesis has contained seven chapters viz. Geography and Early settlements,land routes, trade and traders in ancient period, commodities,development of urbancentres and politics,expansion of settlements in sangam age and urbanisation.

Here Tamil country includes modern Kerala and Tamil Nadu which nomenculture is attested by Tamil Literatary Tradition also. In this ~~dissertation~~ thesis, Sri Lankan data also are to be taken into account as the interaction between Tamil Nadu and Sri Lanka is intensified during ancient period.

First chapter deals with pre historic settlements in Tamil Nadu. Here man began to settle in particular areas which were conducive for agriculture and cattle breeding. In course of time he had concentrated on agroculture which gave raise expansion settlements all over Tamil Nadu. New religious beliefs began to shape which was attested by megalithic monuments in Tamil country. Megalithic people were organised into segmentary lineages. These lineages had their own territorial identity for their socio-economic activities[15]. The lineage group of families which lived in one house or in very few houses. But their economy was pastoral cum agricultural in nature.

The Second chapter under scrores the importance of trade routes and sea routes for the development of trade with Western and Eastern Countries. Internal trade routes were mentioned by South Indian and North Indian literatures. These routes are to be mapped and analysed which were throughly discussed by Modichandra. Recent studies on trade also emphasised the strategic importance of Dakshinapada

(Modern National Highway Seven) in ancient India. It begins from Ganga Valley and runs through Deccan, Tamil Nadu and terminated at Cape Comarin. Another Highway which from Calicut to East has went through Kongu. These two Higways went along the areas where mineral mines of Deccan and Kongu were located. The importance of these Highways is to be analysed in this chapter. The rest houses, Toll system and transport facilities are also analysed. South India's strategic position can be appreciated in international trade network during the period under study. Here sea, wind system, utility of ships, foreign notices have utility of ships, foreign notices have been analysed. Trade contact between west and east is also discussed. In this chapter silk routes are to be analysed.

The Third chapter deals with emergence of traders in ancient Tamil Nadu. There are many kinds of traders who were referred to in Tamil literature. These traders were included into two major sub divisions viz., sea faring traders and Caravan traders. Sea faring traders must have origniated from fisher folk which is attested by the word Paratavar. This word referred to fisherfolk and traders as well. This confirms the gradual emergence of traders from fishermen folks. Traders from foreign countries also lived here. The discussion about ~~there~~ these traders can contribute to the history of economic conditions in ancient Tamil country.

Traders from North India had populated in urban centres in Tamil Nadu. Tamil traders also went to Gulf country, Town in Deccan, Town in North India and urban centres in Sri Lanka. This aspects also discussed in this chapter.

Fourth chapter solely analysed the commodities in ancient trade are to be referred too. There are two types of commodities. One include agricultural commodities and other can be taken from craft production. Also forest products were also made as commodities. Foreign commodities are also analysed. In this chapter prestigious goods and their social importance are also be discussed most of the foreign goods were prestigious commodities. Many commodities were considered as primitive valuables in ancient period. This aspect is also taken up for discussion.

Fifth chapter studied the emergence of trade centres and their ecological settings. Most of the trade centres were located in strategic area which had acted as centres for symbiotic position between different ecological regions. Also they had been located in the areas where rich resources were tamed. In coastal regions trade centres had had the background of hinterlands which were conducive for trade. The emergence of trade centres changed the political scene in ancient Tamil country. The conflicting segementary lineages consolidated in to

confederacy of chiefdoms. Tamil trinity had controlled trade centres and routes for their economic wealth.

The Sixth chapter discusses about the development of settlement and complex social organisation. During early historical period of Tamil Nadu witnessed chiefships and cheifdoms. Segmentary lineages integrated under big chiefs and into chiefdoms. Then Tamil Nadu was divided into fivefold divisions viz. Mullai (Pastoral), Kurinchi (Hilly region), Marudam (littoral), Naydal (coastal) and Palai (arid). Matudam had dominated the other regions in political development as it had rich agricultural basis. Mullai region had enormous mineral wealth which was tamed during this period. This gave impetus to the economy of pastral people. Kurinci also had forest resources which found way to the Western world. In coastal region many trading centres existed as far as foreign trade was concerned. More than twenty trading centre (pattinam) were mentioned in Sangam literature. Among these some had developed into emporium and royal cities.

In the seventh chapter unbanization in ancient Tamil Nadu is to be analysed. Theory of urbanization is taken for discussion. Most of the urban centres had emerged as cosmopolitian cities were hetrogenoues people had lived and took part in trade activites. This lead to the urbanzation. The sources for this chapter are collected from

literature particularly Kavya literature. Also we have corroborative archaeological study is takenup for this chapter since it has meagre source materials. Most of the literary sources indicate the nature of complex society in urban centre which contribute urbanization. In the final chapter all the conclusions about trade and urbanisation are given.

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LAND AND EARLY SETTLEMENTS

LAND AND EARLY SETTLEMENTS

Land forms have considerable bearing on the historical development of a region through their influence on the climate and hence on the means of subsistence. Equally important is their role in defining nuclear areas of human settlement in terms of accessibility and fertility or conversely areas of isolation. This relationship is useful in studying the changing need of communities and the corresponding expansion and shifts in settlements.

The Indian subcontinet has been broadly divided into three basic regions : the Deccan Peninssula, the Indo-Gangetic plain and the Himalayan range. The scope of this study is limited to the southern part of Deccan known as Tamil Nadu which is geologically one of the oldest regions of the earth.

Subbarao, an eminant archeaologist, on the basis of the idea of the `nuclear regions' given by Spate explained the phenomenon as follows:

Accepting this fundamental concept of `areas of attraction, relative isolation and isolation' the whole pattern of development can be defined as one of horizontal expansion, contraction and isolation of lower cultures in different parts of the country at different periods and at

different cultural levels. The divergence in the country is due to the difference in the country is ~~due to the differencr~~ in the cultural melieu of the first large-scale agricultural communities identified regions"[1].

Remarkable illustration of this phenoemnon is seen in the Tinai concept found in the Sankam texts. Each ecological region is said to be particularly suited for a particular love activity and each of these regions are referred to by the most characteristic flower of that region[2].

Hills-Kurunchi - Sexual union and those that lead to it, Pasture lands- Mullai and open terraces- Wife patiently waiting for the husband who is away and those that lead to it, Riverine-Marutam ,Agrarian- Wife sulking over husband visiting hartlot and those that lead to it,Littoral-Neytal- Agony of separation and those that lead to it, Uncultivable- Palai (dry Region) - Separation from family because of elopement and anxiety over separation of husband.

Each of these division is also associated with a distinct military activity[3]. Hill-Vetchi - Capture and recapture of cattle, Pasture land-Vanci - Guarding and raiding the settlement, Agrarian-Ulinai- Guarding and attacking the fortifications,Littoral - Tumpai - Fight to finish Dry - Vakai - Victory.

The social significance of this concept has been noticed by

many scholars. According to Srinivas Iyengar "all these five kinds of natural regions are found in the Tamil country though on small scale and as the South Indian spread from region to region was calculated to produce"[4]. Dikshithar saw in this concept the stage of evolution of civilization. He commented that the Tamil social organisation which had its distinctive characteristics born of environment, as anhropology holds, is unique in having realised the five different stages of human life in pre-historic times"[5].

Thaninayagam observed that "this five fold division throws light on human origins and the development of human culture as has been observed by those geographers and anthropologists who have recently written at length on this subject"[6]. Zvelabil said "it is possible that this division reflects the historical migration of the Pre-Dravidian and Proto-Tamil population from the hills and the jungle to the fertile plains and to the seaboard, or in other words, the development from the neolithic hunter, through the intermediate stage of the keeper of the flocks to the settled tiller of the soil and fisherman"[7].

This explanation on the face of it is both appealing and convincing. But an important fact that has to be borne in mind is that this division was a contemporary phyical reality to the poets of the Sankam period as it is to us[8]. PA in lines 143-202 speak of the various places

~~the place of the partron~~. Lines 143-163 describes Eyirpattinam which is a littoral region, lines 164-177 refer to Vellore a hilly tract where hunters live, lines 178-195 describe Amur an agrarian region ~~watered~~ irrigated by a river and finally from line 196 onwards the hill capital is described. In PPA line 46-392 describe the road to Kanci and the settlements and towns that lie on the way.

It is important to make it clear that the original concept was a division into four regions. Only mullai and kurinci have taken the shape of palai [9]. With rainfall the `shape' could be transformed to the orginal only mullai and kurinchi It would therefore be appropriate treat palai as a seasonal change ANR quotes AN III as providing reference to mullai transforming into palai and kalit for kurinci transforming into palai [10]. This substantiated tol's atatement that the original division way only four [11].

The fact that the different regions and the respective social organisations reveal the successive stages of economic and political evolution should not lead us to the conclusion that the evolution itself was unilinear. Field studies in social anthropology have brought to light many societies with ~~stunted~~ sustained growth. ~~Stunted~~ Sustained growth occurs when production does not (and can not) go beyond a particular point. Internal self-sufficiency, geographical and social isolation are some of

the many factors that contribute to a situation like that.

The different regions and the inhabitants of those places mentioned in the tinai tradition should be taken as depiciting the inevitable uneven development that arises from the geographical background of the social organisation of Tamil Nadu. As Mahalingam said "in prehistoric times people in South India were divided into a number of tribes, the main difference between them being largely due to their geographical environment"[12]. This is all the more striking because some of the modern tribes of South India show remarkable similarities to the groups mentioned in the early literature[13].

The `Tinai' concept should therefore be taken as the fossilisation in poetic convention of the sexual mores and the social and economic organisation of the unevenly developed Tamil communities.

Within `South India' itself the most important element relating to historical agrarian relations is the Coromandal plain on the eastern littoral, extending from the tip of the Peninsula to the northern edge of the broad delta of the Godavari and Krishna rivers. Never deeper than are hundred miles in the Kaveri basin this lowland is moulded into a complex structure by the rocky extensions of a broken range of low hills that parallel the coast, called the `Eastern Ghats' and by patches of

lateritic soils and rocky marine deposit. The Coromenal plain is reversed by streams draining these broken hill ranges blocks of the western side of the Peninsula, the Western Ghats' including the Nilgiris in the North and the Annamalai, Palani and Cardaman hills in the South.

Seen from the west the Western Ghats presents the appearance of a gignatic sea-wall often rising in steps from the store-line-hence the name Ghats. They are a shep and rugged mass of hills, little more than 2000 feet above sea-level at the northern end rising to more than 4000 about the latitude of Bombay, generally increasing in altitude the South and culminating in the Nilgiris with Dodabetta at a height of 8760 feet where the Eastern Ghats meet the wesstern after making a sweep from the other side of the Peninsula. Immediately south of the Nilgiris the only break in the continuty of the western ghats, the Palghat or Coimbatore gap. Which is about twenty miles from north to south and affords lowland access from the Carnatic to the Malabar coast at a level of about a thousand feet above the sea. This easy road in to the Carnatic from Cochin and other ports on the west has played an important role all through history. South of the gap, the ghats reach an even greater height in Anaimudi peak and strike SSE, terminating at the extremity of the peninsula in Cape Comorin. The crest line of the ghats is generally at a distance of from fifty to one hundred miles from the Arabian Sea

although in places it approaches so close to the shore as to restrict the width of the coastal plain to no more than five miles, and it is not uncommon for spurs and ridges to end as cliffs along the coast.

In South India the Anaimalai hills form the most striking range : the higher range consists of a series of plateaux 7000 feet in elevation running up to peaks of over 8000. They are covered with rolling doans and dark evergreen forests cut off from one another by deep valleys characterized by magnificant scenery. The lower range which ties to the wet has an average elevation of 4000 feet and thousands of acres of this area are now under coffee. It contains the teak belt and also produces most of the timber usual in decidious forests belts of the same elevation much valuable game, including elephant which gives its name to the range, are also found there. It is inhabited by hill tribes like the Kadan, Muduvan and Pulaiyan[14].

The Kaveri known as the Southern Ganges has a course of 475 miles and is equally famous for its sancity, its picturesque scenary and its usefulness for irrigation. Tamil literature cherishes many traditions of its origin and is replete with expressions of pious and fervent admiration for the life giving properties of its water[15]. It rises in Brahmagiri, near Talakaveri in Coorg, and flows generally south-eastwards across the plateau making great falls as it descends the Eastern

Ghats and traverses the Carnatic low land past Trichinopoly and Tanjore to the Bay which it enters by a number of distributaries in the district of Tanjore. The river twice forks into two forming islands-Seringapatnam and Sivasamudram-fifty miles apart, the celebrated falls of Sivasamudram have been harnessed to supply electrical power to the Kolar gold Fields over a hundred miles distant. Kaveri receives number of tributary the most important being the Kabhani, the Hemavati and the Arkavati. After the conflunce of the Bhavani, it changes its south-eastern direction and then takes an east-south-easterly course before forking a third time to form the island of Srirangam. Immediately below Srirangam, the river divides into two the coleroon and thus remifying over the entire surface of the Tanjore delta.

Tambraparni, arising amongst the wooded hills of the southern ghats and benefiting from both the monsoon, forms a life-line for agriculture in the Tirnelvelly district. At its mouth in the Gulf of Mannar are the famous pearl fisheries often described by travellers from other countries.

The Kaveri has comprised a long-recognised internal boundary between southern Salam and Coimbatore . The Palar and Ponniyar too have also divided portions of the uplands, Kaveri with the southern Tamil plain, Penniyar with the northern Tamil Plain. Modern Coimbatore

~~own~~ occupies a strategic place on the trans Peninsular axis of the Kaveri and Ponnani through the Palghat gap thus constituting links between the two coastal plains of the Peninsula. The Karnataka heartland has been connected with the Coimbatore and Southern Salem uplands and through these with the Corromandel plain by way of the Kaveri in the South and the Palar in the East.

In the Coromandel area the ghats, as noted already turn away from the coast to converge with the Western Ghts in the Niligiris. There are offshoots like Javadi, Shevaroy, Pachaimalai and so onwhich retain something of the plateau aspect but the Carnatic or the Tamil plain increases in width steadily southwards until in the Kaveri basin it stretches for about 170 miles. This plain presents a great contrast to the other parts of the coastal plains and to the Deccan plateau in topography in climate and in history. This is the real old India of the South, the land where all the great historical kingdoms of South India fixed their capitals, the land of unnumbered temples of indigineous arts and of almost prehistoric industries. Here artificial irrigation was practised from remote antiquity and the irrigation system of the fertile river belt between Karur and Tanjore must be almost as old as agriculture itself[16].

In Tamil Nadu neolithic celt and tools have been located[17]. But settlement had not been excavated. It is responsible to locate such

a settlement since they are purely nomads. All the neolithic tools were found near mountains and river beds[18]. There are no other evidences to study about their occupation, culture and pattern of life The main occupation was hunting and cattle breeding wherever they stay they collected the cowdung at a particular place[19]. Before leaving that place, for searching of pastures, they fixed the cowdung resulted in ash mound. This reflects the main occupation of the people and this nomadic life.

This nomadic life slowly changed into transhuman life. That is they started to lead their life by cattle breeding and shifting cultivation. The low rainfall areas of the western Tamilnadu thus formed a corridor linking the North and the South and this provided a major means of culture between the two regions. From it subsidiary corridors ran eastwards into the forests of corramandal region in the east .

Southwards in Mysore iron ores are fairly extensive and geologically belong mainly to the sedimentary group associated with banded heamatite quartzites of the Dharwarian age and party to the deposits of magnatic origin which are titaniferous ores. Apart from these the lateritic spread of South Konkam should be considered a potential source. The early iron workings of Mysore have been made justly famous by the reports of Buchanan and Heyne[20].

In the North of Kerala iron ores are abundant and comprise mostly magnetive and laterite. Magnetite occurs in the form of bands in the metamorphic rocks and of black sands derived from the bands

In Tamil Nadu the ores occur as far as South as Tinnevelly where they are chiefly magnetite and laterite. The ore used in the local pre-industrial furnances was magnetite in the form of magnetic iron sand. The deposits in part of Salem and Trichinopoly are geologically significant enough to have drawn a separate monograph in this area by Krishnan.

In Coimbatore where the smelting furnancess were mentioned by Buchanan, magnetite of good quality is said to occur. The ores mainly haematite and specular occur also in the Niligiris where the most important mass in near Kotagiri. The other areas of occurence in Madras are Chingelput, Pudukottai and North and South Arcot each of Which has had a tradition of preindustrial smelting[21]. Magnetite is the priniciple ore-type of these areas.

The spread of the iron ores is no less extensive in the modern state of Andhra. The regions which are important are Cuddaph, Kurnool, Guntur, Bellary, Nellore the districts of west Godavari and Krishna, Vizagapatnam and Hyderabad.

To the East in Orissa there are enough lateritic cappings

outside the Mahandi - Baitarani delta and for the early smelters of Orissa these deposits alone could have been ample source of iron.

In the south Indian protohistoric sequence iron objects first appear in the period of overlap between the neolithic and the megalithic periods. The general category of iron objects are as follows[22]. Flat cross banded and single banded axes and hoes, The flanged spade or hoe, The flanged hoe or spud, The sickle and bill-hook, The glanged pick axe, Stone - cutters wedges, Bar wedge, Pointed bars and Crow-bars, Chisels and adzes, Knives, Iron tripode, Sword, Daggers and driks, Spearheads, Arrowheads, Coremonial scalloped axes.

The Trisula proper has usually a rivat to hold the side prongs. In one case at Bowenpalli a small iron model of a buffalo was attached to the shaft. The specimen from Malabar has the remains of an iron ring in a similar position whilst one specimen from Adichanallur has a 'Cross bar' at the base of the triple prongs which appears to have been a similar body to the Bowenpalli specimen.

Adichanallur is one of the 38 urn burial sites, reported by Alexandar Rae in the gravelly mounds adjoining the bank by the Tamraparni river in the Tirnelvelly districts[23]. These sites are invariably located on waste or rocky highlands unsuitable for cultivation and there

is ` almost invariable' the site of an ancient habitation in the neighbourhood of these barial mounds.

In Madurai district at Kollapatrai, near Kodangipatti were discovered two small finely-polished stone celts trapezoidal in shape and roufhly ablong in trasverse section and a broken hamme-stone[24]. A similar celt was found at Karuppannawami Koilmedu in Karuvelampatti, Kollanpatrai and Thathanodaimedu, near Bodinayakanur yielded microlithic implements comprising blades, flacks and cores[25]. Urn burials were also found at Nagamalai Pudukkottai, Sengulam, Vedar, Puliangulam, Melakuyilkudi, Palaganatham, Paravai, Samayanallur, Vilangudi, Tenur and Podunbu Sikandar Chavadi, while more Ruset-coated pained were from Karuppannasswami Koilmedu and Avanipuram. At Nagamalai Pidukkottai and Alamapatti were located resepectively cairn-circles and dolmens[26]. Mounds with remains of ancient habitation were notices at Kochchadai, Tenur and Playanattam, on the banks of the river Vaigai and at Samattivatam, Vadapalani and Avanipuram[27].

Microliths, including rectangular scrapers, cores with ripple-flaking and waste flakes and cores were found at Tangalacheri, Sivarakkottai, Tirumanikkam, Alampatti and T. Kalluppati all in Tirumangalam Taluk[28]. At all these places also occured painted black

on red and red and black wares. Pottery with white paintings and dots on black surface and with painted Criss-cross pattern was also found at T. Kallupatti [29].

Cairn-circles were found at Periyar and Gopalapuram. Dolmens were notices at Mallapuram and urnburials at Sangappadai. Tangalacheri Medippanur, Sivarakkottai, Kottaimedu, Annattipath Periakattalai, Vandari, Parpatti, Tirumanikkan, T. Kallaupatti and Vadambur. Etched Crnelian beads were found in a disturbed urn at Sangappadai[30].

There is no evidence of a redical alteration of the neolithic-chalcolithic subsistence pattern during the early proto-histotic period even after the introduction of a new technology i .e iron and a new crop i.e. paddy. The coincidence between areas housing the neolithic-chalcolithic sites and the early Iron Age sites in the southern Deccan is very apparent. The pastoral cum subsistence agricultural economy spreed beyond the confines of the Iron Age, Megalithic - Black and Red ware culture[31], Which initially covered the mountain regions of South India. Archaeological data in association with literary data clearly indicates that Tamilnadu had a strong pastoral, subsistence farming and hunting - gathering tradition during the Early Iron Age[32].

The following are the megalithic sites :

Tagadur, Kannur, Kodai, Alumbil, Velur, Virai, Uraiyur, Aurdur, Kodumhalur, Paramhunadu, Puhar, Kundandai, Vallam, Tenur, Ayirai, Korkai all these are having urns and habitations. Podiyil, Oymanadu, Tirukkoyilur these sites are known for dolmens. Venadu, Senganma these are cairn circles[33].

Lineage :

Megalittic revolution bring the social changes in Tamil country. Most of the early settlements were created by the people who had adopted megalithic culture. More than fifty graffiti marks have been discovered on pot sherds from megalithic burials and habitation sites. These graffiti marks might have been used for clan names. Each clan must have used a particular graffti. We have seen some cluster graffti marks have been brought to our notice which might been used for amalgamation of clans[34]. Even during sangam period amalgamation of clans were referred too. The phrases like 'aimplumvelir', 'paltinoruvelir'; `patinenguvelir' must have indigated the clans amalgamation in Early historical period [35].

The pastoralism of megalithic society made live stock breading and specially, cattle herding in major activity. Accumulation of cattle comes through breeding as well as capturing other herds. Cattle raids

are therefore a form of acquiring fresh stock[36]. Pre historic paintings from Alampadi (Viluppuram Dt) Vellala samudhram (Dharmapuri Dt) have preserved the art of cattle raids during pre-historic period[37].

Megalithic society was essentially pastoral. This did not preclude agriculture although agrarian activities are more frequently attested by artifacts and cereals. The pastoralists may well have controlled the agricultural niches without being economically dependent on them. The society in river basins of Tamilnadu had reflected in sangam texts, more dependent on agriculture although cattle rearing remained a significant ativities. Aelamfary settlements become characteristic of the increasing emhbasis on agriculture which was characterised slow process. Megalithic cultures must have been indegenous ones, since neolithic celts and megalithic burrials were discovered side by side. Payyampalli and Adiccsanallur excavations remind us of end of neolithic period and beginning of megalithic period[38]. Black and Red ware pottery culture might have been adopted by people in Tamilnadu when they met that people in northern fringes of Tamilnadu. Red slipped wares must have been used by pre megalithic Tamil people. Vellarikombai (Nilgiris Dt) are the best example which show the cattle raids in prehistoric times[39]. Cattle raids were referred to in Chengam hero stones which belonged to tribal oriented society upto medieval period. These cattle raids were primary factors for the emergence of leaders. Leadership in this situa-

tion requires the ability to protect not only the herds since cattle are the chief from of wealth but also ones clan, and to defend the claim to ownership of cattle and controlled over the grazing ground or kanam[40].

Chiefs in cattle raids were accepted as chiefs in peace times. During megalithic period chiefs had predominated in political area. Many lineages had engaged in raiding and annexing alien territery. These raids and annexation were intermigled with their day today life. During megalithic period graffiti marks were used to indicate chiefs and chief ships[41]. In Kodumamal excavations many potsheds the following graffitis and in same potsherds these graffitis were engraved with brahmi character like `kon' and `vel'[42]. These clusterof Brahmi characters and graffiti marks and cating the transistion from grasffiti to Bhrahmi character which was introduced recently. In due course (first century AD.) the graffiti marks were dropped. Only Brahmi characters were employed for indicating chiefship. Also menhirs were erected for the chiefs.

In Kongu region neolithic celts and tools have been located. But settlements of that period had not been excavated. It is impossible to locate such a settlement in Kongu region, since they were purely nomads. All the neolithic tools were found near mountains and river beds. Therefore no other evidences to study about their occupation,culture and pattern of life. But neolithic practices were lingering even in the phase

of megalithic culture. Neolithic cave paintings were located. In these paintings, huntings, fighting and dancing scenes are depicted. Horse riding was also painted [43]. This shows that they had and had knowledge about horses. These paintings have been discoverd in the caves at Vellarugampalayam, Maraiyur, and the Nilgiris-all these were around Kongu region [44].

At Vellarungampalayam the paintings are whorshipped even now by villagers and offered sacrifice. The God is called as Vettakarasami. These cave paintings are situated above 4000 feet. only men are allowed to go and worship. There is a temple at foot hills which is a replica of cave paintings. Here also only men are allowed to worship. Women folk are never been allowed to worship either in this temple or cave paintings[45]. There is a reason for the taboo of women folk in the worship. These paintings might have originated in hunting society. In that society men were dominating. Hence in ritual activities also they were dominating. This trait shows the ~~stunted~~ sustained growth of society in Kongu

We cannot give the precise date of the beginning of this worship. But we can surmise that this worship might have been began with the cave dwellers. In western Deccan many pre-historic worships have survived till date. According to D.D. Kosambi this type of worship might have come down without any alteration[46].

There is an ash mound, a kilometre to west of Perur. This must have been left by the ancient cattle breeders. In course of time it came to be called as 'Thirniru Medu' This was also called as 'Budhi medu' and 'Budhi kadu'. the main occupation of the author of these mound was cattle breeding. Wherever they stay, they collected the cowdung at a particular place. Before leaving that place, for searching of postures, they fired the cowdung which resulted in ash mound[47]. Thus ash mound later become'Budhi medu' and Thiruniru medu'. We can see these ash mounds throughout Kongu. This reflects the main occupation of the people and their nomadic life.

Neolithic period was closely succeded by the Iron age. Very few habitation sites of this period have been excavated so far. It is in this period that a very significant pattern of culture, emerged in the funeral practices which is called as 'Megaliths'. The identification of the Megalithic culture is assocated with the custom of disposing the dead prevailed among the people of that period. Megalithic culture witnesses. Iron technology. The introduction of iron technology in to Tamil country made an impact on Tamil society. In northern India the introduction of iron was considered as the root cause for the growth of population. The iron age pre-condition to urbanisation is evident from the number of settlements, iron centres that developed into towns[48].

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33.Ibid. p.16

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35. Agam, 36, 135, 246

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38.Indian Archaeology A Review,

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40.R.Poongundran, Society and Politics in Hero stone inscriptions paper presented in Epigraphical Congress, held at Tamil University Tanjore, 1991.

41 R.Rajan op.cit

42 Ibid

43.Thinamani, Daily, April 15, 1990

44.Ibid

45.Discussion with R.Poogundran, Epigraphist, Coimbatore.

46.D.D.Kosambi, "Myth and Reality capter, `At cross Road' - must be mentioned in this connection.

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TRADE ROUTES

TRADE ROUTES

In the beginning people were roaming in search of passture land from place to place. They were leading a nomadic way of life. Small paths which were used by pastoralists emerged as highways in course of time. Some of the highways were the routes which linked capitals. There is another possibility of emerging trade routes. At first people met at a particular place, where they exchanged their goods. This periodical market also might have been the root cause for the routes. These paths or routes became the trade routes and they are in use till date. This is confirmed by the finds of hoards of coins on the national highways.[1]

Trade routes are one of the important cause for the growth of trade. Except Mothi Chandra[2] none touched this area for their research. So, to get a clear idea is somewhat difficult. Recently a book states that only land and sea routes and about trade which had existed in 18th century A.D[3]. , Sangam age and and then sea routes are discussan in this work. Trade and trade route affected each one among its course of development. Tamil literature, foreign notices, excavations, coins and inscriptions help to know the ancient trade routes. In Tamil literature land route is mentioned as 'Peruvali'.[4] In the foreign notices,

we come across the sea routes in details. Based on these we can build land and sea routes of Tamil Nadu also their influence on trade.

Mullai people and Highway :

Throughout world there is a close connection with the pastoral people in creating Highway. Nowadays also within a time bracket the pastoral people moving from place to place for need of pasture land. This migration of place is happening with an aim. In southern Baluchistan pastoral people are on the move. 'Balusi' mean 'nomad' in Brahui language[5]. This confirms that the pastoral people changing their place for want of pasture land. In Agananuru highway has been mentioned is most of the Mullai songs[6]. There could be close connection between the Mullai region and highways, since it was pastoral tract. This also, shows that the trade routes had emerged because of the cattle - breeders.

Here we can compare the situation in Balusitan[7]. There, the pastoral people has been using the particular route for their pastoral activities. In these routes many places are used as marketing points by the pastoral people and agriculturists. There they exchanged their goods. These are incipient markets. In course of time these marketing points had emerged as merket places and the routes as trade routes.

Indus People and Highway

There is enough evidence to prove that the Indus pastoral people played an important role in transport. For cattle breeding they were in transhumance by that way themselves become traders. They carried goods through cattle in between the Indus cities. The excavation of varities of potteries results that different people migrated to new settlement in distant areas. Afghan potteries made by 'Kulli' people are excavated in Indus. And Indus potteries also unearthed in Kulli. The distance between these two places are nearly 500 to 1000 kms. These two area people were linked as traders, only because of cattle keepers.[8]

In Sangam the Mullai people were in transhuman often for search of pasture land[9]. This is one of the cause for the formation of highway.

Thodar - Highway

Nowadays also among the thodas in Niligiris once in the year they take part in the migration rite (the changing the place settlement). This custom is prevelant only among Thodars[10]. In this celebration both people and buffaloes are participating. At that time they are using a particular way in Nilgiri. If any constraint they met they never changed

their particular way in tune with custom. Before the construction of Pykara dam this path of the Thodas which crossed the river and endered the sites where rituals were took place . But even now in the dam water they and their cattle crossing by swimming and doing their custom[11]. This shows that Thodas used a particular route to migrate to other place. This custom is a remains of Thodas, who pastoralists till date. This custom shows the close connection between Thodas and the routes or path. All over the world cattle breeders occupy an important roll in the creation of path and highway.

Tamil literature says Iyam, Suram, Vali, Neri, Aru and Peruvali are the words which denoted various routes. In all five fold lands (Thinai) 'Vali' which was used by people was mentioned in Sangam literature[12]. In Mullai and Palai regions highways are mentioned. The routes which was referred to Sangam literature are in the neighbouring countries of Tamil Nadu

SURAM

The songs which speaks about the trader who went to Vadugar Nadu for trade mentions 'Suram' and 'Kadu'[13]. Suram means Route[14]. This suram and kadu may denote the way or Highway. Vali went through palai land. These highways situated in Kolar and Deccan. One among these is called as Dakshnapatha[15].'Dakshin' means south

and 'patham' means route[16]. Southern route was one of the highway in ancient India.

Attam or Atar :

Attam denotes Mullai Vali. Atar also mentions as vali in sangam literature. Many of the Ashokan inscription are found in the vicinitywith or in the immediate neighbourhood of ancient gold mines and diamond working on the Deccan highway[17].

Aru :

In South India, all the ancient highways were on the river banks. Sangam literature also mentioned the work 'Aru' for route, which also meant river[18]. For the ancient settlements, water formed an important aspect which decided thier continuety. Hence the early routes were located on the river banks.

Silapathigaram mentious the way which went along the course of the river, which is existing even now[19]. Highway which is going along the river Kaveri is one of the ancient highway. The hoard of Roman coins excavated on the river bank sites such as Vellalur, Perur, Sulur,Kulumam, Anaimalai, C. Kalaiymuthur speak that highway went along the river course[20].

Most of the trade centres situated on the bank of the river - Sangam literature denotes this Aru to indictate street of the cities.

Vali :

Vali denotes other than highways[21]. It is used by people commenly. Even this vali alsowent along palai land

Highways :

There are references about highways in the Sangam literature the earliest Tamil written records speak about these highways which exitesed Mullai and Palai lands. Purananuru says the highway which went to Puhar[22].

Paripadal mentions a highway which went from Madurai to Thiruparangundram[23]. Now it is a highway which goes towards Thirunelvelli.

Highways, were in the use even during 4th Century B.C. Maloney has shown that the gold of the Deccan plateau reached the west coast during the 4th B.C [24]. Fine hexagonally - cut beryls have been found in pre Muryan levels at Taxila [25]. The Arthasatra refers to pearls from Tamraparni conch shells from South India and Vaidurya or bryle of various colours probably from Padiyur in Coimbatore district[26].

Dakshnapatha (southern route) was mentioned in Sathapatha Brahmans[27]. Kautilya has mentioned about this highway. According to him this route was the best route which was free from highway robbery[28]. It also passed through the area full of mineral wealth. Many ancient trade centres had been spoted on this highway[29]. This way was originated in Ganga Vally. Then it ran through Deccan (Hence it is called as Dakshnapatha) and reached Tamil country. Karur is situated at this highway. In the end it terminated at Cape Comarin[30]. Then it was an active trade route. Hence Karur has emerged as a trade centre quickly. Now this highway is national highway seven

Highways in Epic :

Highways are mentioned in epics. We get more information in Silapathigram. Chinthamani says very little. In Perugathai, nattuppervali and 'Kattu' Peruvali are referred[31]. Silapathigaram mentions a highway which went along the bank of Kaveri to Uraiyur and then through Kodumbalur it reached Madurai[32]. In the boundary of Chola Nadu, this highway divided into three and reached Madurai[33]. From Madurai along the river Vaigai a highway went to Chera Nadu.

In ancient days, minor ruler with small areas had ruled not like Maurya, Gupta Kingdom. So in each and every chiefdom, while

entering in thier country they collected a tax called 'toll' from the traders[34]. These rulers are in both forest and countries.With this, Perungathai may state Nattu Peruvali and Kattuperuvali Manimegalai and Kambaramayanam mention about highways[35].

On the highway, tolls were collected by guards from the traders. Agnananuru refers to 'Vayavar' guarding traders who had organised in a 'Sathu'[36] At cross roads there were soldier on guard and they collected tolls from traders[37].

Kongu Peruvali :

Palghat pass was the major cause for the emergence of national highways. Three major highways were branched off from Palghat pass. One was passing through Perur, Avinashi, Erode, Salem, Thagadur, and Kolar[38]. Another was passing through Vellalur, Sulur, Kattankanni, Kodumanal, Kodumudi, Karur, Velautampalayam[39]. Then it reached Uraiyur and terminated at Pumpuhar. Last one passing through Anaimalai. Udumalai, Kolumam, Palani, Thangala (identified with Dindugal) and Madurai, terminate at Rameswaram or Kodikarai[40]. By this we can assume that these highways played a major role in ancient trade

Bharuch - Kanchi Highway :

From Bharuch situated near Bombay went a highway upto Kanchipurm. This highway passed through Paithan one of the Satavahana captial and touching Kanchipuram and went south. From Paithan it went through Brahmgiri, Chandravalli, Sikgarthurgam, Sriparvatham and Kanchi [41]. Roman coins were unearthed in some of these places [42]. By this it is clear that Yavana traders used this highway.

Sea route :

Tamil literature speaks very little about the sea route. We have to dependent forgien authors for the information about the sea route. The author of Periplus Pliny and Ptolemy say about sea route in detail. Pliny mentions Arabian Sea, Indian Ocean, and also the wind which is very harsh [43].

Before 1st A.D. sea voyage went along the coast line. It start in west coast went through Bharuch, Mekhran and it went through the coastal area of Iran, through Persian Gulf, Egypt and reached Red Sea, Alexandria. it was well known trade port. It was situated at the place where east and west meet [44]. Here Asia, Europe and African traders stayed.

SEA ROUTE AND TRADE ROUTES IN INDIA.

Before Augustus, Alexandria was under Arabians and Somaliyas [45]. After recovery by Augustus Indian traders got change to visit here.

Yavana traders considered Baruch as the first and major port of Indian Penninsula. It is well flourished northwestern trade port. Here all the countries traders visited here [46].

Silk route :

China had dominated the silk trade. They knew to produce silk from Silkworm, but they did not part this knowledge to anybody [47]. So, all other country traders like Yavanas, Arabians, Persians went China for silk. That trade route which was used for this is called as Silk route.Not only this but one more silk route had also existes there, along the coastal area of Southeast Asia, Malaysia, Burma runs the East Indian island and through west of South India, it reached Red Sea [48].

These routes were used not only for the silk trade but also for other important changes in political line also was used. The silk route along sea had helped the trade.

Eastern Sea route :

The epic Manimegalai discusses Eastern trade[49]. The routes started as silk route and reached in the eastern countries. East Indian islands and southeast Asia involved in trade even before 2nd A.D. in Combodia, Java and Sumatra Sanskrit inscriptions in Grantha character are discovered[50], So the south Indian people were the authors of these inscription while setting their life there.

Korkai, Marugurpatinam, Puhar, Mamallai, Vasavasamudram all these trade centres are linked with Southeast Asia, East Indian islands and Srilanka only through sea route.

From those routes at least in the time of Augustus several Indian embassies reached Rome. At least four such embassies are mentioned in the Latin literature, namely the embassy from pure country (the territory between the Thsum & Beas) took with it to Rome serpents, monals, tigers & letter written in Greek languages? (2) the Buddhist monk named Germonos (3) an embassy from the (Chera country). It was reported that at Munziris (Cranganore) a temple was built in honour of Augustus and (4) an embassy from the Pandya country brought with it preeious stones, pearls & an elephant[51]. We know that in the time of Augustus commercial relations between India and Rome grew but in this

the balance of trade was in favour of India from the very beginning and as result of this Roman gold poured into the country.

After the discovery of the Monsoon. a voyage from Italy to India, took 6 weeks. The ships Sailed from Mussel harbour (Rass Abu Sumar) at the winter equinox. When the north wordly wind blew favouring travel to Africa and South Arabia, travellers for India & Srilanka started their voyage in July because crossing the Red Sea before the first September they got favourable monsoon wind took them the Arabian Sea with case[52]

Bharukachcha had very intimate trade relations with Paithan the captial of the Satavahanas and Tagara (Tea) a famous town in the Deccan[53]. The journey between Broach and Paithan took 20 days & from there Tagara could be reached in another ten days: One route started from Masulipattinam and the second from Vinnukonda. Both theses routes met in the south - cost of Hyderabad and then this route passing Ter. Paithan and Daulatobad reached Mankind (Ajanta Hills)[54]. From here started a very different journey on the western that traversing a distance of 100 miles reached Broach. This was the famous route of the Satavahana empire which naturally terminated at Kalyan.

Canaetae (perhaps oyster rocks) situated off the west of

Karwar sea - coast & Cherasonesur (Karwar) these ports were always in fear of pirates[55]. After (Cannanore or Hanvar) which was the first market & Tyndis (Ponnani) which was the first port in Tamilagam called Damrica[56]. The famous port of Muziris in Kerala is indentified with Cranganore & Nelcynda with the port near Kottayam[57]. In Muziris the Arab & Greek ships loaded with cargo cast anchor. This port was situated at a distance of fifty miles from Tyndis (Tondi). At the mouth of a river. Nelcynda was situated at a distance of fifty miles from Muziris in the Kingdom of the Pandyas.

Before the periplus the ships proceeding from Aden & Cana followed the sea coast. Hippalus was perhaps the first pilot who inquired about the situation of the ports & the seas & how the sailors could take up a straight course in the sea[58]. Therefore, the south western wind was named after Hippalus from that time ships proceeding to Damarica via Cana and the cape of Spices sailed a little off from direction of the wind. The ships proceeding to Broach and Sindh sailed at three days distance from the coast, and from three following the favourable wind they sailed straight to Tamilnadu.

Cherabothra or Kerala exported large quantities of black pepper [59]. At one time Kerla extended from cape Comorin to the Karwar

point but in the time of the Periplus its northern part had slipped out of the hand of the Cheras and its southern part had been occupied by the Pandyas [60]. Therefore, Kerala at that time consisted of the former Malabar. Cochin and northern Travancore. Tyndis was its northern point, but its most important port was Muziris. In this port the Roman and Arab ships exchanged Indian goods with Roman goods. They also made transactions in cash According to Pliny early merchants coming to Kerala transacted their business by sign language . It is also said that a temple was eracted here in honour of Augustus. In the south of Muziris the ships of Nelcynda cast anchor at Porkad. In the time of the Periplus Nelcynda was within the power of the Pandyas and it may be due to the intension of the Pandyas to gain the monoply of the pepper trade. Pliny further informs us that those Greek merchants who reached Nelcynda were informed by the Pandyas that the supply of pepper at Muziris was much less than they excepted [61].

The Pandya kingdom at that time was confined to Madura, Tinnavelly and part of Travancore. The Gulf of Manner was once famous for its pearl fishery its famous centre being Corchi (situated on the mouth of the Tamiraparani river)[62]. Criminals were employed for pearl fishery. It seems that the writer of the Periplus did not proceed beyond Nelcynda because its accounts of the ports beyond Nelcynda are confused .

Periplus mentions a mountian which could be identified with Varakalli or Anzenzo Rocks on the sea coast of Pyrrhon[63]. After that appeared Paralia. The region extending from Cape comorin was also a place of pilgrimage at that time. People came here to ~~the~~ take holy bath and lead a pious life[64]. In Tamilnadu the Cholas were most powerful and their empire extended from the Periar river to Nellore and Pudukottai and in the south upto the Vaigai river. Its capital Aragaru (Uraiyur) which was destroyed in the 7th Century was a part of Trichonoploy and was famous for its muslin [65]. The Palk Strait was famous for its pearl fishery. The most important port of the Chola Mandala was Kavaripattinam or Puhar which was situated at the mouth of the northern bank of the Kaveri.

Among the other parts of the Chola Mandala were Poduce (Pondicherry) and Sopatma. The recent exacavations at Arikamedu near Pondicherry have yielded evidence that in the first century A.D. it was flourishing port. Sopatma has been identified with Sopattinam of the Tamil literature and it could perhaps be identified with Marakanam now situated between Madras and Pondicherry. In these ports the crafts known as sangara plied. The ships sailing from the mouth of the Ganga to Suvarnadvipa were known as Colandia [66].

As at Puhar there was a small colony of foreigners. Then poduca of the Periplus a poduca emporium of Ptolemy is Pondicherry.

SHIPS

The Sanger raft was made of single logs tied together[67]. The outriggers were made of sawn timber. These two boats were joined together with a cahin. A boat named jangar still plies on the sea coast of Kerala. Pamphas sangar is derived from Sanskrit sanghata. The Jaina Angavijja mentions one of the kinds of boats as Sanghatam.

Colandia is perhaps of Malayali region. Rajendralal Mitra. however, derives this word from Sanskrit Kalantarapota. Perhaps these big ships sailed from Korkai to foreign countires.

The sturdy construction of these two masted ships plying on the Chola Mandala is evident from some of the coins of Sri Yajna Satakarni[68].

The Periplus has mentioned only ~~summarily~~ the cities & ports after Chola Mandala[69]. He draws our attention to Masalia or Masulipattinam and informs us that it was famous for its fine muslin. Dosarene (Tosali) or Orissa was famous for its trade in ivory[70].

In ancient times Indian ships sailed to Malaya, east Africa and the Persian Gulf beyond which they could not proceed owing to the restraints put by the Arabs. In the first, A.D. with the permission of the Kshatrapas, some big ships sailed to the persian Gulf upto this century the Arabs were two monopolists of the western trade & therefore they did not allow Indian merchants beyond Ocelis through Axumites allowed them the use of this port, They were, however, free to sail on the Indian sea coasts.

The goods from Tamil Nadu for foreign countries were loaded in the ports of Cochin. But some Alexandraian ships reached Nelcynda. In the seas of Sri Lanka ships of 33 tons sailed a therefore the voyage between the mouth of the Ganga of Sri lanka was very much reduced. Ships sailed regularily on the Chola Mandala. From the sea - coast of Kerala ships sailed to the ports of Comara, Poduce & Sopatma. To the north of the Chola Mandala in the domain of the Satavahanas two masted ships sailed. Further north Tamiluk was known for its heavy shipping[71].

Ptolemy also mentions about the pirates of the Konkan and many cities in that region. Nitra (Pigeon Island) was a big port[72]. He also mentions the states in Tamilakam. It is evident from him that in the II c. A.D. Muziris was the only lawful port of Kerala. Nelcynda & Becare

no longer had survived only in the form of a City. In the group of the cities Punnati (perhaps a place) near Seringapattnam or Kittur) was the chief source of beryl. Caraura which was once known as Vanji or Karvur is now identified with Karvur near Cranganore[73]. It was the capital of the Cheras in the time of Ptolemy. It seems that the bery 1 mines of Coimbatore in Tamilnad were known equally for everybody.

We can make a guess that the Cheras had the monopoly of the pepper trade the Pandyas were the monopolists of peral trade & the Cholas of beryl and muslin. According to Ptolemy the domain of the Pandyas was a small one and on its sea coast were two ports Elancoros of Elancon (Quilon) and Colchi. Their capital was cottiara (Kottaru) & they exercised their control over the cape Comorin. Their biggest city was Madura. According to Ptolemy after the cape Comorin and the Bay of Calligicon (the Gulf of Calimere) the Romans and Alexandrian Greeks sailed frequently on the eastern sea coast of India. But at that time the Cholas were on the decline. Their capital was at Orthura (Uraiyur). Ptolemy observes that the cholas at that time were on the run. Perhaps this might have been due to the occupation by the Pandyas of the sea coast of Uraiyur and the palk strait where pearl fisheries were located. According to Ptolemy the Chola ports were Nigama (Nagapattinam), Chaberis (Kaveripattinam), Saburas (Cuddalore), poduce (Pondicherry),

and Malanga (Mavilangai). On the sea coast ports controlled by the Satavahanas were Maisolia (Masulipattinam), Kontakossyla (Ghantasala) & Alosygna (Koringa). Ptolemy also knew about many cities of Andhra[74].

The 3rd A.D. saw the downfall of the Roman empire. Trouble rose on its communication system. The sea route from Rome to India closed down & the commerce again passed to the Arab & Axumite merchants. The Sassanians established their control on the Persian Gulf & on the silk land routes[75]. In the later Latin Literature India again passed into the realm of fancy.

Arthasastra of Kautilya throws light on the land routes & sea routes which are not mentioned anywhere else[76]. For the sucess of external & internal trade it was necessary to have good roads & govt officers to regulate the movement on them. The chariot routes, routes leading to ports, roads leading to the capitals of the provinces, the roads leading to the neighbouring states and the roads leading to the grazing grounds were four daindas or 24 feet wide. Sayonia roads leading to the military camps & roads proceding to cemetries and villages were eight dandas or 48 feet wide. The roads leading to the reserve forests for

elephants were 12 feet wide. The chariot roads were seven and a half feet wide. but the animal tracks were merely three feet wide.

The Arthasastra also informs us that ports were provided with many roads and alleys. Before forts were built roads from north to the south and from east to the west were properly planned.

On the Dakshinapatha or the Southern route trade in Chank shell diamond, precious stones, pearly and gold was carried on[77]. Even in this route, that section was considered to be the best which proceeded to mining districts and was constantly used by merchants. This route was also less dangerous and less costly and therefore. merchants always used it because here they could easily buy goods. While comparing the relative values of bullock-cart route and tracks he considers the bullock-cart route better because this road could carry heavy loads easily.

Antiquity of Sea Voyage in Tamilnadu

Boats are found drawn an rock surfaces in two places in Tamilnadu being one at Karimaya Kavundanpatti in Madurai District. Another at Kilvalai in Viluppuram Ramasamy Padayatchiyar district. First drawing depicts a man sailing in a boat while each other travel in a boat. In the second drawing a long pole is also seen as if being used to move the craft. Both the boats are drawn in red ochre. On stylistic ground the figur of karimaya Kavundanpatti appears to be earlier that the latter and be assignable to the end of the last phase of Neolithic period in Tamilnadu i.e.1000 B.C. The kivalai painting may belong to 700 B.C. to 500 B.C.[78].

One more store evidence has come from Alagankulam a port city of Pandyas situated at the confluence of river Vaigai with the Bay of Bengal. A rouletted sherd bearing the figure of the ship on the shoulder portion has been unearthed recently from this site. The excavation conducted in the year 1977 at Alagankulam also yielded a pot sherd of red coarse ware bearing the graffito of a boat. The parctice of engraving ship figure on the pot sherds seems to have prevalent in other countries also as the archaeologists who came across a pot sherd with the figure of a ship, during their excavation held at Berenike Situated in Egyptian Red Sea coast, in the year 1995.

In the beginning the transportation of merchantiles was made through river since the human habitations were on the river banks. In course of time, when they moved to the sea coast they had to sail on sea for seeking market in far off places. Through the sea voyage appears to have reached its Zenith during Sangam age, there was a dearth of material evidence.

`Travalam' were found on the highways. According to some scholars this might periodical market or rest houses for merchants Periyapalayam inscription speaks about sixty four thavalams in South India[79]. There is a village in Salem District by name Vempatithalam. It is interesting to note that these thavalams were named after trees. According to periyapalayam inscription, merchants and their soldiers had always lived in these thavalams.

Contonments :

Medieval inscription refer `Adikiltalam'[80]. Tamil literature `talam' means contonment. Hence we can safely assume that `Adikil Talam' means contonment of traders army.

Sangam literature mentions `Aralaikalvar' or higway `Robberers[81]. In perungatai there are reference about Skrimishes between highway robberers and highway guards [82]. Highway

robbery was prevelant in `Sangam age. This was also attested by Sundarai hymns about Murugan Poondi [83] .To check the highway robbery highway guards were made to roam on highways. Megalithic monuments unearthed are located on the highway and trade routes[84]. From this megalithic, many iron swords and knives have been unearthed. All these evidences reveal the fact that soliders had lived in these settlement.

As already mentioned on the highways, tolls were collected by guards from the traders. Agananuru refers to vayavar guarding traders who had organised in a `Sattu'[85]. In the medieval time tolls were named as `Sangam'[86].

Theru :

In Sangam literature `Theru' was mentioned as trade centres. Theru and Perunteru were mentioned in medievel inscriptions.Merchants had lived there.

Trade and trade routes gradually developed in Tamilnadu. These routes ran through the area which was full of mineral wealth. Trade routes and highways were dotted with Rest houses and warehouses. Highway net works resulted in the emergence of trade centres. Some of the trade centres had ceased to exist an account of the fall of Roman trade.

1.Schwartz Berg Joseph.E. A Historical Atlas of South India, Map 24-C

2.Modhi Chandra Trade and trade Routes in Ancient India p.

3.Ibid.

4.Tamil Lexion Vol V p.2803

5. Philip Carl Salzman " The Proto State in Iranian Baluchistan" Origins of the State. p.131

6. Agananuru verse 64,74,84,104

7. Shareen Ratnagar, Pastoralist in pre History of Baluchistan, in studies in History Vol.III No.2 p.141.

8.Shareen Ratnagar, Encounters the Westerly trade of the Harappa Civilization p.44

9.Shareen Ratnagar, Op.cit p.140-141

10.Edgar Thurston, Castes and tribes of Southern India Vol.VII 1975 p.136-137.

11.R.Poongundran, M.Phil thesis Sengam Nadukatkal p.19-20.

12.Agananuru verse 182 line 11;Kurundokai verse 269 line 1 .

13.Agananuru verse 7 line 13; verse 5 line 8

14.Tamil lexion Vol III p.1525

15. Himanshu Prabha Ray Monastery and Guild. p.31.

16. Lexicon, p.

17. Himanshu Prabha Ray Op.cit p.31.

18. Agananuru verse 182 line 11 ; Kuruntokai verse 269 line 1

19. Silapathikaram Canto 23 line 185.

20. K.S.Vaidyanathan The Ancient Geography of the Kongu Country p.68.

21. Agananuru verse 155 line 12,

22. Purananuru verse 30 line 13

23. Paripadal verse 8 line 95

24. Himanshu Praba Ray Op.cit p.29. (Quatation from C.Maloney)

25. Ibid

26. Ibid. p.31

27. Ibid

28. Ibid

29. Schwartz Berg Joseph.E. Loc.cit

30. Ibid.

31.Perunkatai Conto I, Kotai 49, line 75

32.Silapathikaram Conto II line 70-74.

33.Ibid

34.R.S.Sharma Urban Decay in India (C.300-C.1000) p.157.

35. Manimegalai Canto 12 line 59, Kambaramayanam Conto 1 verse 355

36.Agananuru Verse 89, line 13

37.Perumpanarrupadai line 81

38.S.P.Kandaswamy Kongu and the Roman Coins. Journal of Numismatic Society on India vol X LVI, Part I & II p.41

39.Ibid.

40.Ibid.

41.Himanshu Prabha Ray Op.cit p.56

42. Schwartz Berg Joseph.E. Loc.cit

43.Tamilnadu Varalaru Kulu, Tamilnadu Varalaru Sanga Kala valvial Madras, 1992 p.172

44.ModiChandra Op.cit p.109

45.Ibid

46.Ibid.

47. Ko.Nayagam Ph.D Thesis Pandaiya Tamilar Vanibam p.62

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51. V.Kankanabai The Tamils Eighteen hundred years ago p.37

52.Modi Chandra Op.cit p.117.

53.Ibid

54.Ibid

55.Ibid

56.Ibid

57.Ibid

58.Ibid

59.Modichardra Trade and Trade Route in Ancient India

60.Ibid

61.Ibid

62.Ibid

63.Ibid

64.Ibid

65.Ibid

66.Ibid F.N. p.118

67.Modichandra Op.Cit p.118

68.Ibid

69.Ibid p.119

70.Ibid

71.Monasty and Guild,

72. Ko. Nayagam Op Cit p.60

73.Ibid

74.Modichandra Op cit p.122

75.Ibid

76.P.T.Srinivas Iyangar

77.Ibid p.26

78.Natana Kasinathan, Antiquity of Sea voyage in Tamilnadu.P.1 "Kalvettu" 1997 April-July

79. S.I.I Vol.VII No.442

80. Srimad Kambaramayana Agarathi Vol III p.51

81. Tamil Lexicon Vol.I p.258.

82.Perungatai p.p.284-285.

83.Sundarar Devaram Thirumuruganpoondi Pathikam verse 1

84.Schwartez Berg Joseph .E. Loc.cit

85.Agananuru verse 81

86.S.I.I Vol XXVI

TRADERS

TRADERS

The literature of the Sangam age informs us that in the big cities of south India lived great caravan traders who constantly travelled by road and sea routes. According to the Silappadikaram in pukar or Kaveripattinam there lived a sea caravan leader (manaikan) and another master of caravan on the land route (Masattuvan). The Tamil literature does not give enough information about the sea-route, but there is no doubt that the south had trade relations with Ujjain through Paithan. South Indian merchants and pilgrims reached Varanasi via Ujjain. The Manimekalai mentions that a Brahman pilgrim from Varanasi along with his wife paid visit to the Cape Comorin. The Silappadikaram mentions the sealed goods from North India reached the south and merchants had to pay customs duties and other taxes on the loads.

Sea ports serve as gateways, foreign lands. Coming out from these gateways Indian merchants met foreigners and through these gateways entered foreign merchants who sold their articles to Indian merchants and bought manufactured and raw products of the country. This commerce continued for a very long time. Ancient India merchants exporting Indian goods to foreign lands and importing forign goods were not merely mercenary traders but also ambassadors of Indian culture, who though working for their own profits, had enlarged their social view point.

Inter Tinai Exchange

The impact of maritime trade may be recognized in the changing fortunes of the Partatavar, who became the most distinctive merchant group in the latter part of this period of intensive trade. According to the traditional tinai scheme they were inhabitants of the neital tract, simple rustic folk, following occupations such as fishing, manufacturing salt and making toddy. Pattuppattu depict them as being involved in long -distance commerce and also pearl fishing. Under the influence of commercial activities, they diversified from these traditional pursuits and took to organizing trade in pearls, conches, chank bangles,tamarind, fish, gems, horses and other riches. Here trade seems to have been a dynamic intrusive element leading to the development of this tract and its people.

Number of other types of merchants were also involved in the buying of goods from the hilly regions and from the sea coast areas and carrying them to other centres within Tamilnadu. The specialists merchants in large trade centres like Madurai, Uraiyur and Puhar, where market facilities were available to their commercial activities. Their names were mentioned such as Aruvai Vanikan, Ilampon Vanikan etc.

Silappadikaram says that in Puhar different kinds of goods were brought in ships by foreign merchants who have left thier native

homes and settled here. There is very little information about the regions from where these foreign merchants hailed, but certainly they included people from Rome, Southeast Asia, Srilanka and other parts of the subcontinent. In land, the production and transportation to the waiting ships, were in the hands of local traders and craftsmen. Pliny and Periplus support this.

The Tamil anthologies mention several kinds of traders , including hawkers, peddlers- vambalar, vilainar, pakarnar and big traders as well as those who traded in specific items salt merchants-umanar. In the market places of big centres like Puhar and Madurai, several specialist traders selling particular wares are known. Most of them were however, producers as well as sellers of such articles. They were in general different from those involved in trade with distant regions and foriegn traders. It would be rather difficult to rank the different traders on the basis of the volume of trade which they conducted. Epics speaks these merchants were wealthy , whose presence in the commercial and port town was significant.

They would most likely be those who conducted large-scale trading and commercial activities and possibly also controlled the movement of goods within the region. thus guild would have been important in regulating such movement. The references to Masattuvan in

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the Silappadikaram, to Kaviti and nigama in Tamil Brahmi inscriptions, interpreted as guild chief and guild respectively, would indicate the prevalence of such organization.

Generally industry and the trade was carried on by groups of hereditary craftsman pursuing their profession at the ancestral workplace. Rare instances of persons of any one caste being engaged in activity not prescribed for their caste are not wanting. Nakkirar, the poet considered to be a brahmin was engaged in the conch-cutting industry. Many instances of merchants and traders being poets are known. Kannan Puhundarayattanar was a palm-leaf (olai) sellers, Sittalai Sattanar was a seller of millet and grains Beri Sattanar and Domadaranar were lapidaries. It is clear that the leisured and moneyed merchant community was intersted in literary activites[1].

Most of the trade was carried on by barter. It is not clear if cattle which was considered wealth was an exchange commodity. Paddy constitued the most commonly accepted medium of exchange, especially in the more rural parts of the land. Well purified white salt was sold for paddy[2]. Paddy was sold by mentioning its price in terms of salt[3]. Honey and roots were exchanged for fish(liver) oil and arrack[4]. Sugarcane and rice flakes were exchanged for vension and toddy[5].

In the Pandya land the prosperous housewife whose house was well stocked with white paddy poured that grain in to the basket of the shepherdess who had brought version. The housewife exchanged green grams for the thorny fish of the minlstrel, and poured the white paddy into the vessel in which the wandering bard had brought the fish[6]. It is noteworthy that the system of purchasing food stuffs, expecially vegtables from street hawkers by paying for them in rice or in paddy. A different type of barter which can be called. 'deferred exchange' was known as kuri edirppai which means taking a loan of a fixed quanity of a commodity to be repaid as the same quanity of the same commodity at a later date. In view of the wide prevalence of the system of barter, it may be supposed that coins were used for purposes of exchange mostly in the case of foreign trade.

There were establised markets or bazars called angadi in the bigger towns while elsewhere hawkers brought most of the things to the doorstep of the householder. In some cases articles were sold at the centre of manufacture, e.g. Salt was in the case of those who resided in the coastal tracks, sold near the salt pans. But salt is such a necessary article of consumption that the salt mercants called Umanar carried large bags of the commodity from the salt pans to many places in the country in carts which had no covering overhead[7]. The numerous references to

manufacture and sale of salt, make it appear to be a very important object of trade. Strings of rickerty cards passed along the mud-made roads carrying salt into the interoir right up to the hill country and salt carts and salt sellers are frequently referred to by poets. Thus the lord of the crowed of salt-sellers who appears on the hill is addressed in Agam. A king is compared to the strong bull which dargs with strength out of holes in the road the many felloed cart which carries to the hill county the salt which grows from sea-water.

Rice and cotton cloth were taken from the valleys to the drier region. The pulse and milk products of mullai were taken to the region where wet-cultivation was carried on. The millets honey and other hill products were carried to other regions. ~~There~~ these articles were bartered in ~~greatest~~ large quantities where the highlands(Mullai and Kurinji) met the lowlands and the great centres of barter developed into trade centre.

The economic and ~~Wife~~ vice habits of the cowherds and the sheperds are brought out in a passage in Perumbanarrupadai where it is said that"the young cowherdess sold buttermilk and clarified butter in the Kurinji villages and took back paddy" for domestic consumption and buffaloes for their professional use.

There were two kinds of trades.(1) those who manufactured and sold at the place of manufacture and(2) those who went about selling the goods - the retailers who were mostly hawkers. Bags of papper were taken about on mules and sold in many places.

There were two kinds of markets i.e. bazars in the leading cities like puhar and Madurai. 1. Nalangadi the morning bazaar and 2. allangadi or andikkadai the eveing bazaar[8]. In the markets such large varieties and such large quanties of goods were sold and purchased and such crowds thronged and such busy transaction took place that the poet Ilango calls them. 'The residence of Tirumagal - the goddess of wealth'. There is a detailed description of the markets in the city of Puhar in Silappadikaram, and of the bazaars of Madurai in Maduraikkanji and in Silappadikaram.

Many people of many counties speaking many languages crowded in the bazaar streets of Madurai, naturally the foreigners who permanently resided there must have gone about shopping in the bazaar or perhaps the foreigners included those who had come from outside Tamilaham to make wholesale purchases of Tamilian goods for sale elsewhere or those who had brought demanded goods from foreign places for delivery here. In the evening bazaar in Madurai, the following persons were busy selling and buying, the grocers the sellers of conch-bangles,

goldsmiths, appraisers of gold and gold articles, dealers in foreign cloth like kalingam other textile dealers, sellers of copper wares, painters,dealers in perfumes flowers and sandal paste.

In the bazaar of Puhar:dyes,scented powder, sandal paste, flowers and aromatic wood like ahil were sold in abundance Flowers were greatly in demand especially during festivals and more particulary during the festival of India. so that the flower bazaar looked like a forest of flowers. Normally textile dealers, sellers of perfumes flowers, sandal paste, scented powder, sellers of salt, oil mongers,dealers in bronze and copper wares, carpenters, goldsmiths, artists like painters ans sculptors, dealers in dolls, lapidaries, those that sold false hair or false wigs, traders in sheep, fish and mutton and sellers of cakes and vegetable edibles thronged the bazaar.

The sailors wandered about the bazaar which was situated in Maruvurppakkam, the suburb of Puhar. There the traders lived in seperate streets. When merchants from various places crowded in the bazaar with their bags of goods they took care to indicate on the parcels the names of the owners and the contents of the packages. The carts on which the packages were piled also had particulars about the owners and the goods written on them. Near the bazaar, there were ware houses, in which goods could be stored in rooms which had no ventilators or

windows. A very simple type of advertisement which announced what goods were available and where was adopted by these traders, each shopkeeper had his flag which waved over his shop and the inscription on the flag announced the commodities sold in the shop. The merchants sold their goods by openly announcing the profit they were aiming at. It was believed that honest trade led to increased trade which meant increased wealth, integrity in trade was generally appreciated[9].

Vanikachchattu :

The merchants functioned often in a body. Apart from the tendency to associate as ' Guilds' and 'Chambers of Commerce'. The wandering hawkers literally went about in large numbers together. In Sangam age as till a century ago , 'Caravans' of traders used to go from place to place as a 'whole group' and never ~~even~~ in small units for they were in mortal fear of highway robbers. Such merchants bodies were called 'Vanikachchattu' and members of the warrior clan were recruited to escort their caravans. Inspite of these protective measures they were not free from danger from robber gangs. If the robbers beat their tannumai- kind of shrill drum it was almost certain that some Vanikachchattu was near at hand, the many reference to Aralai kalvar show that these caravans of trade were not always left unmolested[10]. In Agananuru and Kurunthogai we learn about the difficulties faced by them, while travelling through forest.

In Silapathikaram and Perunkathai there are references about Sathu. In Silapathikaram Kovalan was adviced not to go alone, but with the Sathu during his travel [11]. Perunkathai says about'VairaSathu'[12] who are diamond traders. So for each commodity, there was a Sathu. Traders paid their customs duty. Customs officers were there on highways for collecting such taxes.

The Greeks were the greatest intermediaries of trade to India with Europe in the early days of the birth of christ Augustus conquered Egypt in 30 B.C. and be tried to develop a direct sea - trade between India and the Roman empire. Strabo says that he saw in 25 B.C. about 120 ships sailing from Hormus to India[13]. Embassies went to him from several Indian states, for Augustus himself says that Indian embassies came frequently. This led to the volume of India's trade with Rome there is evidence of the brisk trade between Tamilaham and Rome resulting in the inflow of considerable gold into Tamilaham. Pliny litterly remarked that not a year passed without the Empire paying out 100 millian sesterces to India, Cheraland and Arabia'. The direct trade route between Tamilaham and Aabi, Egypt and Rome had been well established by the date of the periplus. Red sea ports were the point up to which the Tamil vessels could go, Alexandria was the point up to which the Roman vessels came and the Tamil ports were reached by the



ROMAN - LADDY.

Eqyptian vessels, the eastern trade beyond Tamilaham with Burma, Malaya, Java, Sumatra and china was mostly in the hands of the Tamils[14].

Yavana:

The Western merchants who visited the Tamil land, were known as Yavanas. the word Yavana is derived from the Greek laones, which is the name of the Greek nation in their own languages. In the old Sanskirt epic poetry, the word Yavana is invariably used to denote the Greeks. Similarly in ancient Tamil poems also the name Yavana appears to have been applied exclusively to the Greeks and Romans[15].

The Greeks sailed from Egypt in the month of July and arrived at Musiri in about forty days. As the Indian seas were infested by pirates, the Greek merchants brought with them chorts of archers on board their ships. Egypt being at this period subject to Rome the archers who accompanied the Greek merchants have been Roman soldiers. The Pandyan king was the first to realise the benefits of an alliance with the Romans. He sent two embassies to Augustus Caesar, desiring to become his friend and ally[16]. One of the reached Augustus when he was at Terracona in the eighteeth year after the death of Julius Caesar (B.C.26) and another six years afterwards (B.C.20) when that prince was at Samos. Roman soldiers were enlisted in the service of the Pandyas and other Tamil Kings.

There is enough evidence in the Tamil literature to prove that Roman soldiers and Roman ~~artificers,~~ officers lived in various parts of the Tamil country. The Roman merchants brought wine and gold coins into South India, and the name Yavana which originally meant `Greek' was by this time extended to the Romans too, the Greeks having sunk to insignificance in matter of international relations. A poem refers to "the cool, sweet, smelling wine, brought by the yavanas, in beautiful vessels and drunk daily from gold cups held by damsels who wore bright bracelets[17]. Another poem refers to the import of gold coins. It says that "the beautifully built ships of the Yavanas came agitating the white foams of the periyaru, with gold and returned with pepper and Musiri resounded with the noise[18].

Roman soldiers settled in the Tamil country and were employed as bodyguards of kings. They acted as the gate - keepers of palaces. It is stated as `the yavanas with murderous swords, excellent guardians of the gates of the fort - walls'[19]. Many Roman engineers and artificers also settled in the Tamilnadu. Tolkappiyam defines Vlinai one of the stages of war, as comprising the siege and the defence of a fort. Naccinarkkinlyar the commentator, explains that forts possessed engines made by Yavanas[20].

Though ocean - going ships were known to the Tamils and the Romans, the western sea was so much infested with pirates that the Roamn merchants convoys tool military protection for their ships, coherts of archers came on board their ships escorting them. The Tamils must have realized the excellent military discipline of the Roamns and benefited by their example. Romans were employed as guards of the fortress gates.

Encarved potteries were excavated at Alexendria by American researchers. It is written in prakirth language. Some were written in Greek loetters which belongs to 2nd century A.D[21]. This proves the eminient trade between the South Indian trader and Yavana trader. Romila Thaper says about a inscription given by Asuraipalan belongs to north Sematic about Pandya country and Kudak nagar, which belongs to 7th century B.C. A temple known as Baladevan was worshipped by Tamils. These shows that Tamil traders went in groups to western countries trade[22].

As late as the 2nd century A.D. evidence of trade in bulk goods between Musiri and Alexandria in Egypt comes from a Papyrus in the Vienna Museum recording a trade agreement in Greek between a vanikar from Muciri and a trader from Alexandria[23]. The agreement was apparently written in Alexandria, according to which certain specified

quantities of Gangetic nard, ivory items and a variety of textiles whose value was equal to the price of 2400 acres of land in Egypt were to be exported from Muciri, in ships to a Red sea port, then taken on Camel crossing the desert and the Nile, reaching Coptos and then shipped to the mediterranean town of Alexandria. This clearly attested the trade of Tamils with Alexandria.

Kautilya's Arthasastra mentions that Suvarnadvipa or Malaysia was visited by Indian merchants in search of aromatics and spices for a very long time. The Sankha Jataka mentions a voyage to Suvarnadvipa[24]. A Brahman named Sankha seeing his property diminishing on account of his munificent habits, took to a voyage to Suvarnadvipa. The ship was built by himself and loaded with cargo. In ancient India the wooden ships were often drowned by whirlpools because of its simple construction. It is mentioned that on the 7th day of Sankha's voyage the ship developed leaks and the sailors were unable to bale the water out. Sankha, keeping calm took a servant with him and oiling his body and partaking a meal of ghee and sugar climbed the mast and plunged into the sea and floated for 7 days.

The Mahajanaka Jataka gives an eyewitness account of a sinking ship. The ship of Mahajanaka sailing with speed towards Sri Lanka developed cracks and began sinking. When the ship began sub-

merging in the water then he caught hold of the floating mast. Others floating in the sea were attached by dangerous fishes and turtles and the sea became red with their blood. After floating to some distance Mahajanaka left the mast and hegan swimming freely. In the end he was rescued by manimekala the goddess of sailors. According to the Sankha and Mahajanaka Jatakas, the goddess Manimekala presiding over the seas protected voyagers with religious bent of mind. As a goddess her worship was common in the city of Puhar situated at the mouth of the Kaveri and there was another temple of hers situated at Kanchi. As a goddess her influence extended from the Cape Comorin to lower Burma (Tara is known as Maimekala goddess in Burma).

The sailors had their own guild, whose chief was called as myamakjettha. It is said that at the age of sixteen, Supparakkumara had become the chief of his guild and gained proficiency in the art of navigation[25].('Manayakan' is known as Sailors chief in Tamilnadu.)

In ancient times Indian ships sailed to Malaya, east Africa and the Persian Gulf beyond which they could not proceed owing to the restraints put by the Arabs. In the first century A.D. with the permission of the Kshatrapas some big ships sailed to the persian Gulf. From the north western sea-coast of India ships sailed to north eastern Africa upto the point of Guardafai and transacted business there. But even for

that they had to take permission of the Arabs and Axumites. Upto this century the Arabs were the monopolists of the western trade and therefore, they did not allow Indian merchants beyond Ocdis though Axumites allowed them the use of this port[26]. They were, however, free to sail on the Indian sea-coasts. After the discovery of the monsoon the trade monopoly of the Arabs broke down and many Indians began sailing to Egypt. An inscription found in the temple of Pan at Benenice near Rhodesia informs us that there was an Indian traveller named Subahu who sailed between India and Alexandria. But in Rome proper except for envoys, slaves, merchants and acrobats no other Indian went.

Recent archaeological excavations in Burma, Thailand, Malaysia and Indonesia have added to the range of objects of Indian origin found in Southeast Asia, but more significantly they have pushed back the antiquity of these early contacts[27]. The sites involved in this maritime network include both coastal and inland centres and date from 500-400 B.C. onwards, coinciding with the beginning of the late Metal Age in Southeast Asia.

Beads of agate carnelian and glass are widely distributed in southeast Asia, both in time and space. Neolithic sites in general seem to have produced beads in locally occuring substances such as stone and shell. Imports such as coloured glass, faceted carnelian and etched

agate beads are characteristic of Metal Age sites and range from 500 B.C. to A.D. 1500[28]. Sources of carnelian are rare in mainland southeast Asia, though scattered in the Indonesian archipelago. Hence the origin of Carnelian beads has been traced tothe Indian subcontinent.Carnelian beads have been found at Ban chiang in Thailand, the slab graves of Malaysia, the Tabon caves on Palawan in Bali. The manufacture of etched carnelian beads was a specialized craft practised in the Indian subcontinent from the Harappan period onwards and was one that become particularly important in the Early Historical period.

Analogies with ceramic, stone and metal sbecimens from the Indian subcontient area also sought for the bronze bowls with a cantral knob found in the cemetery of Don Ta Phet. About thirty of these vessels made from a high - tin bronze were found during the excavations at Don Ta Phet[29] and these are associated with other prestige goods such as the carnelian and glass beads, very thin walls and the Knob in the centre of the base is in the form of a sharply pointed cone which is sometimes cast integrally with the vessel, but more often made separately and rivetted through a hole in the base. Bronze bowls with a central knob occur in the Magalithic burials of the Niligiri Hills[30]and another specimen comes from Souttoukeny located 30 Kilometers upstreasm from

Arikamedu on the river Gingee. Unlike the beads, the bronzeKnobbed vessels in central Thailand were locally made and only model may be traced to a south Asian origin. Indeed it has been suggested that as the use of a high, tin bronze was not so common in India, these bowls were perhaps imported into the subcontinent and hence their occurrence in Adichanallur, Taxila and the Nilgiri Hills. More recent analysis shows that a distinction should perhaps be made between imports from India as contrasted to objects produced locally from Indian prototypes and those showing Indian influence adapted to local tradtiions. Thus glass beads were initially introduced from India, but later locally produced using clay crucibles which have a long ancestry in the region. Similarly the use of ston double moulds has great antiquity in Southeast Asia where they were used for bronze casting. At Oc Eo these double moulds were employed in the casting of tin pendants and one of them bears a legend in a mixed kharoshti - Brahmi script[31]. At Buni, gold and carnelian beads, gold eye - covers, a range of pottery, stone adzes and metal artefacts have been recovered very distinctive, are the gold eye - covers made of silver with a thin facing of gold, these shows Similarities with the nineteen `diadems' recovered from the Megalithic graves at Adichanallur in South India. Another import was a stamped sherd with a bird motif, similar to Wheelers type 10 at Arikamadu.

Carnelion seals are most common inscribed with Brahmi characters, of which the earliest specimen from Khuan Lukpad (15-20 Kms. from the Andaman)dates to the first century A.D. though they continued until the 6th-7th centuries. Carnelian seals have been found at three major coastal centres, kuala Selinsing, Chaiya and QcEo Excavations at Beikthano have yielded one of the sealings of unbaked clay with Brahmi letters of the 2nd century A.D. The finds of seals and sealings has so far been restricted to mainland and peninsular Southeast Asia with little contribution from the Indonedian archipelago. The widesppread distribution nevertheless indicates trade rather than exchange and the use of Brahmi and Kharoshti around the beginning of the christian era may be taken as the use of the script for secular puposes such as trading transactions.

The term suvarnabhumi used in early sanskrit and pali texts to refer to southeast Asia has generally been taken to indicate that gold was the principal attraction. In addition there was the demand for aromatics and spices. The Arthasastra refers to aloe - wood that came from beyond the sea[32]. Sandalwood, particularly of the red variety, was obtained from the dry regions of eastern Indonesia, while the finest grades of cinnamon and cassia were native to mainland southeast Asia.

Recently discovered a test stone bearing the legend of 'Perumpatan Kal' meaning the test stone of master goldsmith, a square copper coin of sangam age and a copper coin bearing the figure of a two masted ship of Thailand, the potsherds bearing the legends 'Catan', 'Kanan' and 'Kora Puman' from the Egyptian ports situated on the bank of Red Sea, and the Tamil names Velan and Ilam occuring in archaic Tamil script on the potsherds from Sri Lanka are the recent indisputable records for the sea voyage of ancient Tamils[33].

Inscriptions were discoverd for the Tamil traders who had trade relation with East Indian islands and also with South East Asian Countries. Inscriptions with Sanskirt and Grandha letters were excavated at Sambha, Thailand and Loes. One among these speaks about `Pourkai Pandiyan[34]. Another one denotes Konguvarman[35]. These cleary says that they belonged to Tamil traders. Recently at Thailand a coin belongs to sangam age were excavated. This belongs to 4th century A.D. This also an evidence to say that tamil trader went southeast Asian countries for trade.

At Java an inscription was discovered. It belongs to 4th century A.D. and written in north Indian language[36]. It speaks about Tamil traders as well as tamil rulers. Near Java at `Pali' an island, at `Porapudhur a world famous Buddha ~~vagar~~ vihar. is situated here[37]. In this

Buddha vigar the paintingd shows about Tamil traders ships and trade commodities.

Tamil Traders in Sri Lanka:

Inscription through light on Tamil merchants who went SriLanka for trade. Traders who visited 2st B.C. to 1st B.C. were mentioned. `Bed' (Pali) which belongs to Tamil traders was discovered at Anuradhapuram[38]. Gems were dicked at SriLanka Tamil traders may gone for parchaaing these Gems.

Recent arological evidences of SriLanka shows that Tamil people created urban culture there `Kantharodai' know for Rudha pillars. This was knows as well developed urban centre at 5th century B.C.[39]. Near Kantharodai a place known as yanaikaotai, here a seal with Tamil Brahmi letters were unearthed. It is written as `Kovath'[40]. Recently a pottery with Tamil Brahmi written as `Villiye' was excavated [41]. The above evidence clearly states the merchants of Tamilnadu had healthy trade contact with Sri Lanka.

Pattinapalai speaks as "Ella thunayu"[42]. A name of a poet in Sangam literature is "Ellath Buthan Devanar[43]. This gives an assumption of Srilankan tardes were also well versed poets.

Allagankulam excavation yields, srilankas names, marks, etc. Allagankulam situated near Srilanka[44]. It may easy for the traders to vidit offen. The excavated pottery says that they went Deccan through Tamilnadu. the potteries which were unearthed at Tamilnadu. Srilanka and Deccan are similar of Yavana pottery [45]. That confirms the trade extended from Srilanka upto Dhamlok.

North Indian Traders :

Sangam literature and Silapathygaram[46] speak about north Indian traders in tamilnadu Nagarams. In Tamil Brahmi inscriptions [47] and potteries, north Indian names were encarved, such as Varuni, Vishaki, Kuharan, Chandrigan, Kuvavan, Sengayapan, Arithan, Kasyapan, Yathava. This indicates that north Indian traders visited Tamilnadu. Iebam, Nigamam, Thampam, Siri, Kani were also mentioned. Paunch marked coins, Blackware potteries were brought by north Indian traders to Tamilnadu[48].

Deccan traders :

Sangam literature speaks about Deccan traders[49]. It says about the Tamil traders who went to Deccan for trade. And there is no mention about Deccan traders in Tamilnadu. in the epic Manimagalai[50]. We come across the names such as Maratiyar,Kammar, Avanthi Koller.



SATAVAHANA- COINS-

These labours were brought to Tamilnadu by Deccan traders. We get araeological evidence for vaduka nadu traders in Tamilnadu. At Dharmapuri Satavahana terracotta figurings were unearthed[51]. This may be brought by vaduga nadu traders for their workship. The same terracotta fingures were excavated at Coimbatore. `Kaiylon' pottery which was belong to Satavahana unearthed at Karur[52].

Satavahana coins were excavated at Kanchipuram Kadalur Karur. The Satavahana coins which were unearthed at Andhra[53]. The names embossed Tamil and Prakirth language. I.K. Sharma doubted about the language. But the Tamil words such as Magar, Arasan, thiru were embossed. May Satavahana rulers introduced two langage coins, in north and south India. At Kanchipuram the seal of the Satavahana coin was unearthed[54]. This may be brought to Tamilnadu by the vadugar traders.

The early Tamil poems are generally silent on the origin of merchants, although in early socities merchants are said to have emerged from among chiefly families led to concentration of economic wealth in the hands of those close to the chief. The circulation of wealth through gifts among Kinsmen close to the Sangam chiefs, both the Vendar and the Velir Chief, as Puhar was of the Cholas, Korkai of the Pandyas and Muciri of the Cheras all of which point to the direct involvement of the

ruling elite in the promotion of trade.

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The above discussions shows the traders of Tamilnadu who carried their activity not only inside Tamilnadu but in neighbouring countries also. Among this, SriLanka, Eastern countries like Java Thailand etc. were proved the healthy trade not only in Sangam literature but also in archaeological evidence. Among foreign countries Greek merchants played a very prominent role in the economy of Tamilnadu. The foregoing discussions attest their dominent role in the raising of urban centre.

1.Agnanur 24

2.Pattinapalai 29-30

3.Agananur 60

4.Porunarrupadai 214,215

5.Ibid 216,217

6.Aingurunuru 48

7.Kurunthogai 388

8.Maduraikkanci 1.439, 1.544

9.Ibid 365-373

10.N.Subramanian Sangam Polity, p.235

11.Silapathigaram Conto II line 190

12.Perungathai Conto. I. Con 36 lines 223

13.History of the Tamils P.T. Srinivasa Iyengar 195

14.Ibid 206

15.V.Kanakasabhi The Tamils Eighteen Hundred years ago, 37. P

16.Ibid

17.Purananur Verse 56, line 18-20

18.Agananur Verse 149, line 9-12

19.P.T.Srinivasa Iyengar Op.Cit. p.313

20.Tolkapiyam - Commentary II 10

21.Journal of American Oriental Society 111.4 (1991). p.p731 - 736.

22.C.ka.Citrrampalam, Pundaya Tamilagam, Jaffina, 1991, p.113.

23.Mahadevan, `Ancient Tamil Contacts',K.Rajan, `Muciri Turaimukam', - `Cila Putiya Ceitigal in Avanam, Jan - 1994. p.p 107 -10.

24.Modi chandra. Trade and Trade Routes in ancient India p.61.

25.Ibid

26.Ibid

27.Himanshu P.Ray The winds of change p.92.

28.Ibid p.94

29.Ibid p.96

30.Ibid (F.T)

31.Ibid p.101

32.Modi chandra Op.cit. p.78

33.`Kalvettu' N.Kasinathan.

34.The Hindu 5,12 May 1992

35.T.N.Subramanian, The pallavas of Kanchi in South East Asia, Madras - 1967 p.56

36.Ananda K.Coomarasamy, History of Indian and Indonesian Art, New Delhi 1972. p.200.

37.Ibid

38.S.Paranavitana, Inscription of Ceylon Vol.1 No 94 a

39.Ponnampalam Ragupathy, Early Settlements in Jaffna - An Archaeological Survey, Madras 1987 - p. 61.

40.Ibid p-202

41.Dinamani 9.5.91

42.Patinapalai line 191.

43.S.Vaiyapurippillai ([illegible] Sanga. Ilagiam p.1423.

44.Natana Kasinathan et al Alakankulam, A preliminary Report, Madras, 1992 p.13.

45.Himanshu Prabha Ray, Op Cit p.140

46.Silappathikaram Contol Kaa - 4, Line 37.

47.Ra.Nagasami Muthaliyor, Kalvettiyal P.62,69 Iravatan Mahadevan, Arikkamedu Graffiti: A second look, Damulica Vo. II, part III, p.p 60-62, The Hindu, B June 1986.

48.Damulica, Vol I p.52.

49.Kuruntokai Verse II, line 7

50.Manimegalai Kaa 19, line 107-108.

51.The Hindu, 13 Augst, 1978

52.Ki.Srigharan, Ko, Archunanan, Karuvurum Agavlvaipagamum, Madras 1992 p.15.

53.Himanshu Prabha Ray, Op Cit, p.150(map)

54.Indian Archaeology, 1970 - 71, A Review, p.p. 32-33.

COMMODITIES

COMMODITIES

Ancient trade helps in transportation of commodities from one place to another that from region to region. Agricultural commodites, forest products, sea products, handicraft goods were sold as commodities.In ancient world, cow used as commodity as well as exchange commodity. There are enough sources in Sangam literature, great epics, sanstrict literature, foreign notices, excavation reports, inscriptions, for analysing commodity. The ancient commodities were such as agil elephant horn, sandalwood, pepper, sugar, salt, paddy, ginger, milk, gey.. better milk, cotton, shell bangel, pearl, beads, diamond, gold, silver, bronze, silk, goldornaments, lamp, mirror articles, potteries, gold coins etc.were used.

In Tamilnadu there were three types of commodities viz., food products, clothes and ornaments, foreign goods. In this food products sold as internal and external commodity clothes and ornaments were sold only in local trade centres and also in foreign trade centres. Foreign goods were used by few, who were rich.

Paddy :

River beds were taken for paddy cultivation. Different paddy varities were used in ancient time. Among the five regions, Marutham

enjoyed richness. Sali paddy was said to the one of the high quality paddy[1]. Rice was considered as the staple food of the rich people in ancient India.

Rice was exported to foreign countries. Greeks had called rice as `orija'[2]. This name may be borrowed from Tamil word. This shows that there is a possibility of export rice to Greek. It was exported from Musiri and Thondi ports. The evidence shows that paddy cultivation started at the early 5000 B.C. onwards in Tamilnadu[3].

Tamil Brahmi inscription speaks about the gift given in the form of paddy. Adithanallur, Sanur and Kodumal yield paddy husk .In Srilanka, paddy cultivation carried out and also exported[4]. For this they used Tamil ports such as Musiri, Thondi and Nelkinda[5].

Jaggery :

In sangam period sugar was produced from the raw material sugarcane which was cultivated in and around Tamilnadu. Adiyaman had introduced sugarcane cultivation[6]. But it might have been taken of Adiyaman.

Perumbhanarru padai, Malaipadukadam and Pattinappalai say about the method, used by those people who extracted sugar from sugarcane. Alagarmalai inscription speaks about the sugar trader[7].

Sandel (Aram) :

Ancient people called sandel as `Aram' in Tamil. Sangam literature says this as `Santhu' they also cultivated sandle[8]. Patinapalai says that sandel was too much in western ghats. Silapathigaram denotes the export of sandel and also the imports of sandel from eastern countries. Only few poems refer sandel as commodity.

Agil :

It is a perfume tree. It can be see in the pepper cultivation areas, in western ghats. Perunagathai says about Agil [9]. This was exported to western and eastern countries through pumpuhar.

Teak :

Sangam literature speaks about teak. We can see this in hilly region. Agananuru says about thekkamal means teak grove [10]. At western ghats teak was cultivated. In Egypt palace construction, it was used. Romans imported teak from India[11]. Pumpuhar excavation yields teakwood[12].

Pepper :

Sangam poets called pepper as miriyal, kari. Sangam literature says about its cultivation at western ghats. Pepper played a

very important role in food, and also it had its medical value. Preumbanarrupadai says about peppers medical value[13].

Pepper was exported to local regions like Pandiya country, Kongu country, Vadugar Country, north India and also to foreign like Rome, Egypt, Greek, etc[14]. For Southeastern countries and China, pepper was exported through Puhar[15]. Agananuru and Purananuru say about pepper export [16]. Pepper occupies a peculiar position in the history of food. 'As dear as pepper ' was a common saying [17]. Foreign geographers such as Pliny, and Ptolamy say about yavana import of pepper from Tamilnadu[18].

Among spices in terms of quantity pepper ranked the highest especially to the Roamn empire. Pepper perhaps made up three fourths of the total bulk of the average Rome bound cargo ot more than half. The periplus says that the ships which visited the western (Malabar) ports in the first century A.D. were of a large size, on account of the pepper that was being carried. Common black pepper was exported from kutta nadu (cottanara the region around Quilon and Kottayam) where the climate was most conducive to its growth[19].

The Pattinappalai refers to sacks of black pepper reaching the Cola port of Kaverippumpattinam by carts, presumbly by the

circumpeninsular route from the west coast. The references to pepper or other spices going to north India are few, but evidence of its entering the internal exchange system in Tamilakam is available. The 60 Cholas and Pandyas would have attempted to control the west coast, the only region where pepper was availble and hence the Ceras having a virtual monopoly over it. The ports of Muciri and Nelcynda (Kottayam) owed much of their prosperity to the pepper trade and became prominent commercial centres [20]. It is possible that Tondi was also involved in a small way in this trade through the Ponnani river, whose tributaries would have brought down the pepper from the Malabar hills.

Elephant horn :

In Tamilnadu forest elephant horns yield much income. Elephnat horns were considerd as prestigious gift which was given by forest people to their king chief[21]. Purananuru says that the king received sandel, elephant horn deer etc as tribute from forest people[22].

Elephant horn was a exchange commoditity for forest dwellers. They dont know the value of the horn. They exchanged horn for toddy[23]. Sangam poems refer to about the exchange of horn for toddy by hunters and forest dwellers.

The northern boundary of Tamilnadu was Venkat hills in which there were full of elephants[24]. The tribal people known as Kalvar made horn as trade commodity. These people exchanged horn for toddy, and paddy[25]. Patirrupattu mentions `Umparkadu' means as elephant forest[26]. Modern Anamalai is idendyfied as Umparkadu. In Kongu and Chera country we can see plenty of elephants

Elephant horn were exported to vedugar country, north India and yavana country. Silapathigaram refers to the articles which were made by horn. Deccan excavation yields decorative dolls and horn combs[27].

Elephant horn was exported to foregin countries also, which was attested by foreign writers. The excavation at `pompil' which was a Roman city, yields goddess Lakshmi which was engraved in elephant horn [28]. It belongs to 2nd century A.D.

Pearl :

Korkai yield too much of pearl. Eventhough other river beds of Tamilnadu yield pearls, but pearl of Korkai was more valuble than others. It had world fame. It was exported to Egypt, Rome, Greek and other western countries [29].

Sangam literature speaks ~~in large~~ about Korkai pearl. Agananurn, Purananuru say about Pandia and pearl[30]. At Korkai fisherfolk took pearl along with fish in the sea. They changed peral for toddy.

At Panthar pearls were famous. Madurai also famous for its pearls. Silapathigaram says about varities of pearl. In sangam age pearls were used. But in Silapathigaram pearl were differenciated according to its quality[31].

Ramayana also says about peral. In Chera country Musiri also yields pearl[32]. Arthasasthra called it as Sowirnayam. Egypt queen used Pandian country pearl[33]. Kalinga inscription says that the ruler Karavela had received tribute from Pandian in the form of pearl. At Andhra excavations from Pattipurolu Buddha vihara yields Pandian pearl[34].

Amphorae Finds :

The amphorae is a large cone shaped, double handled Mediterranean wine jar, buff in coulur and made of well levigated clay.

Amphorae began to reach to the Arikamedu from the first century B.C[35]. At least two sherds from the site have been indentified

as fragments of Graeco - Italic jars of the second century B.C. Some of the amphorae fragments from Alagankulam also seem to have been recovered from a layer of the pre-christian era[36]. In all those amphorae sites which have also yielded the rouletted ware(e.g. Alagankulam, Karaikadu, Karur, Nattamedu, Arikamedu) the former ware occurs half a century or more after the latter. The rouletted ware had a very long time span in India(300 B.C to 400 A.D), whereas the amphorae was in use in a few sites of the country for the maximum of three hundred years(100 B.C to 200 A.D) though sherds from layers of a very late date (3rd, 4th century A.D) have recently been reported to Alagankulam[37].

Almost all the amphorae sites were early historical urban centres of considerable commercial and political and religious importance. Hence all these centres had a prosperous 'elite' class of people who were the regular consumers of the wine. Even in the Tamil Sangam works there is a clear indication that the Roman wine, known for its high quality and fragrance, was meant mainly for the kings and nobles alone and not for the common masses who could afford only the local varites. The Periplus catergorically states that wine was one of the chief items of import into the port of Barugaza[38].

ARRETINE WARE, AMPHORA AND CONICAL JAR SITES IN TAMILNADU



Recent studies on the amphorae finds in India have, however, defintely indicated that the amphorae was used to contain, besides wine, a varity of other substances such as foodstuffs, olive oil and medicines [39]. In Arikamedu alone for example, there are several fragments of olive - oil jars from the northern Adriatic area and a few(nine) sherds of the Spanish amphorae for garum (a Spanish fish sance), though the bulk of the amphorae pieces are campanian wine jars of the first century B.C. and first century A.D [40].

The find a amphorae pieces in any site, does not necessarily indicate trade in wine, The amphorae in the Buddhist sites of northern and western India may indicate a demand in the Buddhist establishments for items like olive oil (which was certainly an item of Roman export to India) rather than wine. The finds of garum jars in Arikamedu clearly suggests that there was a Roman settlement at the site since garum was a prized item in the diet of the early Romans and the sauce was certainly not of interest to the Indians [41]. In any case, there is no evidence to show that garum was an item of trade between the Romans and the Indians. The foodstuffs may have been brought by the Romans for their own conumption not only with in India.

Conical jars erroneously termed as 'amphorae' or 'imtation amphorae' have been recoverd at Kanchi Vasavasamudram, Karaikadu

and Arikamedu. Unlike the geninue amphorae, these handle less jars are of very coarse fabric and are mostly dull red in colour.

African Red ware :

Alagankulam yielded unique type of pottery with lustrous red surface made from well levigated clay, with a generally thin cross-section. The ware has been identified as of the late African red slipped varity and its probably place of origin was in Tunisia. Few sherds of this ware have been reported from Arikamedu. These belong to 100-110 A.D [42].

Matel Artefacts :

The bronze statue from Brahmagiri and bronze jug belong to early Greeks at Avinasi[43], very much within the Roman coin yielding region of Coimbatore.

An unpublished find from Udhagamadalam is a small bronze (or brass) figure probally of a Roman priest, seated on a throne. The priest is clad in pleated drepery and holds a thunderhold in his left hand. The sulpture is fixed on a pedestal which bears a legend reading ROMAE[44].

Glass Objects :

Few glass objects of Roman origin have been reported from Arikamedu. The most important find from Arikamedu is the fragment of a rimmed bowl of whitish iridescent glass[45]. Bowls of this type originated apparently in Italy and spread throughout the Roman world from the first century B.C. to the end of the first century A.D[46]. All the Roman glass items at Arikamedu are of the first century A.D. except a single specimen which was recoverd from a pre-Arretine layer (late first century B.C.) The bowls may have been used the Romans residents at the site[47].

Clay or terrcotta objects :

Arikamedu has yielded atleast three fragements of the Roman lamp[48]. Two of these lamps are almost intact. Both of them are circular in shape, are having four nozzles and the other twelve. The latter also exhibits the omphalus (know in the centre). Human figurines in terracotta recovered from Arikamedu are undoubtedly imitations of the Graco - Roman specimens[49].

Jewellery :

Arikamedu has yielded in numberable beads and gems, some of them believed to be of Roman origin. One of the gems is reported to



AMULET - VELLALUR

bearns the head of Augustus in intaglio while the other, a quartz intaglio, represents Cupid and the eagle[50].

The aurei hoard from Vellalur also contained many gold jewellery items which included four very important finger rings, two of them locally made and two imported. One of the India rings portrays a lion with kifted paw, while the other exhibits a fish. Among the imported rings. One represents a lady dressing her hair and the other a dragon and the head of a Graeco- Roman soldier with elehorate headgear[51].

The Roman coin hoard from Karivalamvandanallur also included a few gold jewels, on one side the head of Ptolemy of Egypt and on the other a jar and cornucopia with a badly - mutilated legend on heperiphery. Though the jewel exhibits non- Indian motifs, it is belived to have been made in India.

Of all the minor antiquities, the finds of Graeco - Roman jewellery in Tamilnadu are the most interesting. Graeco - Roman artists seem to have worked along with local ones in the Tamil country. This could be the chief reason for many of the ancient jewellery often found in association with Roman coins, displaying a synthesis of Mediterranean and Indian motifs.



MUTANA- KARUR.



ROMAN COIN

There is every possibility that sizeable quantities of Roamn gold jewellery reached the early Tamil country by means of trade and were lost or melted during the medievel period.

Gold Signet Ring from Karur:

A remarkable signet ring in gold was found on the river bed of Amaravati in Karur. The amorous couple portrayed on the face of the ring is truly one fo the finest expressions of Indian art. The absolutely perface proportions of the figure, the concept of symmetry as delineated in the legs, face and body, the followings limbs, the composition and use of space the remarkably agreeable contours, mark this as one of the most outstanding pieces of Indian art[52].

Two other rings of great significance have been recovered from the same river bed in Karur in recent times - One is a gold ring with a legend in Tamil - Brahmi reading upa (s) an ie, a lay devotee and the second a silver ring also with a legend in Tamil Brahmi characters reading Tittan[53]. The former suggests that it belonged to a merchant who was,judging from the contemporary records, a lay disciple of a Jain monk[54].

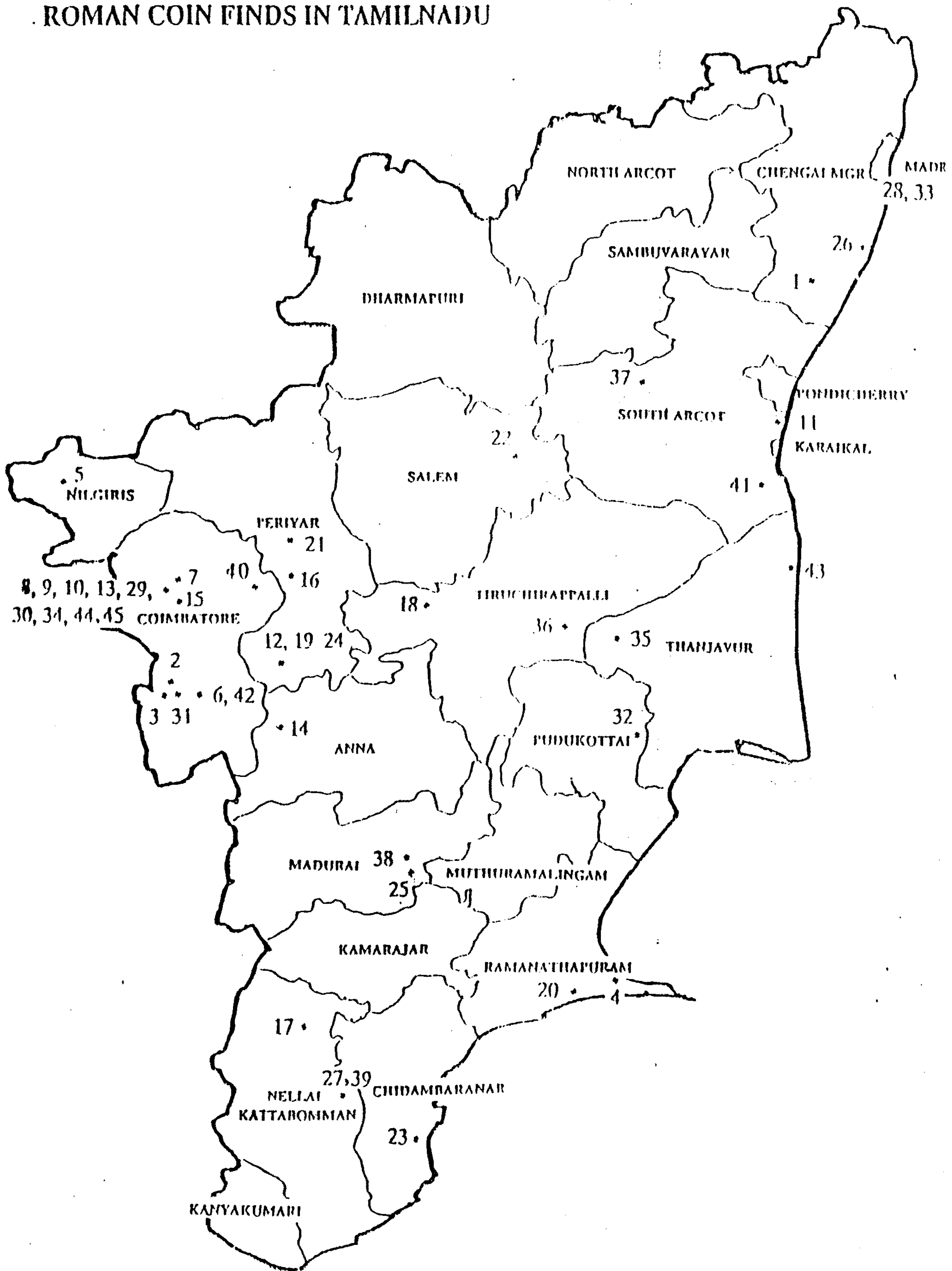
Roman Coins:

Roman Coins found in Tamilnadu range in date from the Second-first century B,C to the fifth century A.D[55]. Early Roman coins abound in Tamilnadu. The majority of the finds occur as hoards, usually in earthware pots. Kottayam (in Kerala) is the only hoard, probably in the whole of the India, which was not found within a mud pot; this find is one of the largest Roman hoards in India and most of the issues are supposed to have been simply buried in the soil; it has also been reported that some of the coins of the hoard were found in bags which have been destroyed, while a few issues were found inside a brass vessel.

Chavadipalayam and Sulur near Coimbatore have revealed Roman issues within Megalithic monuments(Pandukulis). While some of the Roman finds from North-West India(Ahin-Posh, Kabul valley and Manikyla) were part of ritualistic deposits within Buddhist Stupas, the use of Roman coins below the foundations of an old Hindu temple at Nellore and maybe at Saidapet (Madras) are the only known exceptions.

Pre-Augustan Roman coins have been reported from over ten Indian sites, spread throughout the sub-continent. The finds from

ROMAN COIN FINDS IN TAMILNADU



KEY TO MAP

1.Alamporai (Alampara)
2. Akhilandapuram
3. Annamalai
4. Alagankulam
5. Bishopsdown
(Udhagamandalam)
6. Budinatham
7. Chavadipalayam
8. Coimbatore District
(find spot not knowm)
9. Coimbatore District
(find spot not known)
10. Coimbatore District
(find spot not known)
11. Cuddalore
12. Dharapuram
13. Kalikanayakanpalaiyam
14. Kaliyampattur
15. Kallakinar
16. Kongayam (Kongeyam)
17. Karivalamvandanallur
18. Karur
19. Kathanganni
20. Kilakarai
21. Kodumanal
22. Koneripatti
23. Korkai
24. Kulathurpalaiyam
(Kulattuppalaiyam)
25. Madurai
26. Mahabalipuram
27. Malayadipudur
28. Mambalam
29. Pennar
30. Perur
31. Pollachi
32. Pudukkotai
(Karukkakkurchi)
33. Saidapet (Madras city)
34. Sulur
35. Thanjavur
36. Tiruchirapalli
37. Tirukkoilur
38. Tirumangalam
39. Tirunelveli
40. Tiruppur
41. Tondamanathan
42. Udumalpet
43. Vellaiyaniruppu
(Kaveripumpattinam)
44. Vellalur
45. Vellanthavalam

Kallakinar and Tiruppur (Tamilnadu), Eyyal(Kerala) and the Laccadives(Lakshadvip islands) are the known specimens from South India.

The Palghat pass stretches through the ranges of hills running from the Nilgiris in the North through Anaimalai and Karadomom hills in the south. The pass play a very important role in ancient trade because it was the sole route from the Kerala coast into Central southern India specially in the early first century A.D, when the circumnavigation of Capecomorin was considered too hazardous. It may be noted that first century Roman finds are more in Western and South western India and most of finds of this period on the Coramendal coast are believed to have come from the Malabhar region through the pass. The highly prized beryl(aquamarine), was then believed to be found only in India. The major mine was at Pattali(padiyur) in Periyar district and a smaller one at Vaniyambadi in North Arcot distrct, the precious stone was in great demand in the Roman world during the first century A.D[56]. Added to this was the demand in the west for semi-precious stones like crystals found in places such as Kodumanal.

Imitation Coins:

Imitation of Roman coins have been reported from many sites in Central, Western and Southern India. The maximum number of finds

comes from Andhra. In Taminadu such specimens have been discovered mainly at Malayadipudur and Madurai.

Slash marks on Roman Coins :

One of the most important and peculiar characteristics of the Roman coin finds in India is tha occurence of the slash marks on some of the coins. Such marks have not been seen on any Roman coin found outside India, including those recovered from Central Asia and Africa. The slash-marks, usually 1-2 mm in length, have been effected by a chisel or a knife. The marks have been mostly found on the obverse of the coins, that too over the head of the Roman Emperor represented on the coins. Almost all of the slashed coins are 1st century issue. Majority of the coins were slashed during the first century A.D or in the begining of the 2nd century A.D.

The majority of the Roman coins found in Tamilnadu and Kerala exhibit princes, queens or deities. It is intersting to note that although a large number of Roman ships came to India for trade, no Roman issue representing a ship has been reported from South India so far, although ship are found on Roman coins were in circulation with in Europe.

Rouletted Ware:

This refers to a pottery type which bears rouletted decoration, shades of grey and black are very common. The ware occurs both in the course of archaeological excavations and also on the surface. The ware is very common throughout the coramendal coast from West Bengal to Kanyakumari and also in SriLanka. As far as Tamilnadu is concerned, the rouletted ware sites are fewer in number than the Roman coin sites. This implies that the imported pottery,or atleast the rouletting technique travelled to the remotest nooks of India during the early historical period.

Some sites which have not revealed a single Roman coin have brought to light hundreds of rouletted sherds, many of these sites were mentioned neither in the Tamil sangam nor in the classical accounts and have never been regarded as ancient trade centres.

The Romans travelled in India from the coast to the interior through rivers in canoes, hence most of the Roman antiquities including coins are found in sites located on the banks of the major rivers. In the case of the rouletted pottery, all the sites yielding the ware are situated either on the coast or on the banks of the river.



IRON - FURNACE

Manigramam and few sites in Andhra. The manufacture of local copies was done only in the south because the rouletted ware was extensively used only in this part of India and the imitations were meant to fill up any short fall in the supply of the original wares from Rome.

IRON :

The excavated iron objects from various places clearly indicates, that iron must be the indigneus material and the subjugating power of the iron smelting intrudors, exercised over the pre existing Neolithic pastoral cum agriculturists and the protecting poer of the pastoral cum agriculturists whi got transformed into iron using people. The Periplus states that from the inland regions of Ariake, India iron and steel was imported by the west. Contrary to the view that the source of the iron should be sought either in China or in the Cherakingdom.

In Chennimalai, just 20 k.m away, from Kodumanal had high quality magnetic ore and the surrounding areas had all the fuel needed to melt them. The Kodumanal craftman melted the ore and made iron[61]. Enough proof has been obtained of the existence of quite a few iron workshops in the area. A large quantity of slag was found heaped on one side of the work spot, about 60cm. below the surface. A number of earthen pipes to blow air over the fire and spot where the crucibles were kept have been found burial under the floor of the workshop. Most

The rouletted finds from Arikamedu were assigned to the first century to second century A.D. The rouletted technique was probably introduced at Arikamedu from the west[57]. Sometimes in the second century B.C. Some of the Roman traders reached Arikamedu from the Malabar coast through the Palghat pass. The limited information on the east coast of India in the periplus could also be attributed to this. But the use of the port of Arikamedu for direct sea trade with the Romans, atleast from the first century A.D onwards, is nodoubt, unquestionable. The site of Alagankulam has also brought to light rouletted pottery in layers of the pre- christian era. One red rouletted sherd found on the surface of this site, bore a six lettered Tamil-Brahmi legend reading Ti-Ca-an-palaeographically assigned to the second first century B.C[58].

Black and red ware is the chief type of pottery found in assosiation with the rouletted sherds throughout India. The rouletted ceramics occur along with the russet coated painted ware in Kanchi, Uraiyur, Arikamedu, several Andhra- Karnataka sites, Kodumanal and Karur [59].

Rouletted ware has occured along with the northern black polished ware at Alagankulam [60]. Rouletted ware of local origin has been reported from Kanchi, Karur, Kodumanal, Korkai, Vanagiri,

probably the craftsmen used belows to blow air.

The number of iron implements and tools and the large quantity of slag and other indications of steel manufacture in Kodumanal, may solve the mystery of the source of iron and steel supply in the Miditerranean region at that time. Archaeologists of various countries have down the source with a convex surface. These may be spindles used for spinning cotton. The iron beads also found. These beads were actually made by moulding process.

The Alagarai excavation yielded, shapes like kinves, daggers, arrow heads etc . Since most of them were obtained in pieces, their exact shapes could not be determined.

A large number of iron objects were unearthed in Tirukkampuliyur, but most of them were found in a bad state of preservation. The selected iron objects identified were as follows : chiser head Tanged arrow head, nail of round section with know head, spike of tenticular section tapering towards one end, hook with a sharepended end, Garbed arrow head. arrow head, a ring, Larhar's knife, a cylindrical rod with a thick bulging portion in the middle. Broken part of a nut-cracker and a thin knife blade with a pointed end and share edges.

High quality of ore was found in Idayapalayam [62]. The site



CARNELIAN BEADS - KODUMANAL.

gives an idea that there should be an industry prevailed then. More details are expected in the future excavations.

Beads :

The semi-precious stone inculde carnellian agete, jasper) and rock crystal and amethyst Garnet is yet another semi-precious material out of which beads were made in ancient india. Finally soap stone with its smooth surface and soapy feel. Which is an ideal material for beads had also been found in Tirukkampuliyur [63]. Apart from these specimens, well shaped but unfinished stone heads and tiny rock crystals were also collected, which were doubtless intended for the bead making industry in Kodumanal and Tirukkampuliyur. The occurance of tiny quartz crystals and unfinished stone beads and pices indicate that they were being manufactured locally by the people of that times.

CARNELIAN :

Kodumanal megelith yielded the highest number of carnelian beads nearly 8000. These beads were considered by those megalithic people as very presicious and that is why they were put as offerings to the departed. The colour of carenelian stone ranges from pale yellow to pink. Most of the beads are etched with white colour designs. There

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were four groups of beads. They were 1.disc. cirucular, 2. barel 3. cylinderical and 4. oblate [64].

The raw material was not available locally. The nearest source, for that must be either Srilanka or Gujarat [65]. A good quantiy of carnelian chips was obtained. But no half finished bead or some such evidence was found to consider the place definitely as a factory site. This doubt has to be cleared by future work.

SOAP STONE:

Eighteen soapstone beads were found in Tirukkampuliyur all of them range in colour from brownish grey to greyish green [66]. Most of them are barrel in shape and others sphereical, cubical or rectangular. Alagarai also yielded these semiprecious beads .

QUARTZ BEAD :

Kodumanal was definitely a factory site for quartz objects[67]. The broken pieces of rock crystal occured there. A workshop as such could not yet be located due to the limited nature of the digging. Quite a variety of quartz objects have been noticed, finished as well as semi finished beads, roughly shaped balls, cylinderical discs, rings, truncated cones, blades etc. All these were from habitation site. Many roughly

shaped balls or various sizes may have been meant for making balls or beads.

Tirukkampuliyur sixteen quartz beads of which three were broken and two well shaped, without hole for stringing were found [68]. There are six small rock crystals (Quartz) with their well developed natural geometrical faces. Apparently these tiny crystals might have been collected for converting them into beads of convenient shapes. There is also one green coloured bead hexagonal in shape. Most of the quartz are barrel shaped, a few of them are cubical, circular or spherical.

AMETHYST :

Amethyst was also used often for making beads and rings. Among other precious stone sapphire has some beads. Garnet has some fine beads opal and jesper, have each on bead. Four beads in lapis lazuli. All these were from Kodumanal habitation site [69].

There are five amythest beads ranging in colour from purple to light violet was find in Tirukkampuliyur [70]. Most of them are barrel shaped. One of these beads is beautifully ribbed or fluted in shape. Carnelian has been used for five beads. All of them are barrel in form and the colour is uniformly orange. Red carnelian is nothing but red chalcedony. Besides four garnet beads, two barrel shaped beads of



CARNELIAN BEAD - HORSE

banded agate, one banded jasper bead and a few agate beads have been unearthed from this site.

STEATITE BEADS :

A few steatite beads of interesting shapes have been found in Tirukkampuliyur [71]. Three beads are very long, measuring about 2cm, in length and 1 cm in diameter. These are also collared varieties.

PASTE BEAD :

A large number of paste beads were collected far from Alagarai and Tirukkampuliyur [72]. The common shapes in them are spherical circular, barrel and tubular. Among beads small and very tiny disc like beads which form a unique variety by themselves deserve mention. These tiny forms show the minute workmanship and skill involved in the bead-making industry of the region. This show affinity in workmanship and parallel development of the bead making industry in the two different sites.

SHELL OBJECTS: SHELL BANGLES:

Shell was a popular material for making bangles and to some extent beads. Comparing with Kodumanal a large number of bangle pieces of shell were collected from Alagarai and Thirukkampuliyur [73].

These are helpful to corroborate the evidance found in the Sangam classics regarding the use and popularity of these shell objects in those times. They were of two varieties, the plain and decorated ones. The decorations seem to have been effeted by incisions made by a sharp instrument of the exterior surface only. The ornamented designs on pieces consisted of straight liners arranged to form simple geometric patterns especially to from the criss-cross designs. In some of the pieces, there is a broad grooves in the centre and it is suggested it was fitted with a gold leaf as a decoration and ornament. It is equally interesting to note that some of the pieces were painted with red ochre paint, traces of which were found on some of the specimens.

SHELL BEADS :

A good number of shell beads were found in Alagarai, Thirukkampuliyur and Kodumanal . Among shell beads in Kodumanal two are big disc. Cylinderical ones are long cylindrical bead and the rest are thin disc circular beads. These latter ones were about 7.5 cm in diameter and 1mm thickness. The Tirukkampuliyur beads which are generally either corn shaped or barrel shaped and were occuring in a lightly decomposed state. The beads include a variety of shapes in

different sizes, their sizes show a diameter ranging from about 2mm to 4mm.

GLASS BEADS :

Of glass oibjects bangles and beads are the main objects. The glass objects are the main objects appeared at Tirukkampuliyur rather late i.e. about the beginning of 4th century A.D [74]. Their colour varies from violet to red and their size from 1mm to 15mm. The shapes include cylindrical, spherical, bioconical, barrel,Multifecetted, fluted or segmented, tabular, round, sand collared one. In Alagarai, excavations they occur in a variety of colour like white, green, yellow, blue, violet, black, red and orange. In Kodumanal excavations Black glass is the predominent veriety followed by red and blue [75].

GLASS BANGLES :

At Kodumanal glass bangles in black colours have mostly two grooves on concave surface [76]. There is a fine yellow piece with an embassed design. Some bangles are multi coloured, yellow and red being embossed black etc.

The coloured beads are of the special interest because they are reported from a number of sites on north and north western India

dealing from about the 3rd century B.C .

The raw materials for this industry are some from outside and few locally found. For shells, They could have get from gulf of Manner, for glass objects from coastal areas . For quartz beads, the raw material available in near by places of kodumanal. The finished and semi finished lapis lazuli reveal that there must have been workshop and for this the raw material is not available at local or near by places. From Afghanistan this raw material could have been brought [77]. The finished and semi finished beads and the raw material for this shows, that there must be a workshop and may ~~be it~~ export it to foreign countries.

TEXTILE :

There were a number of spindle of about 10cm. which tapered towards one side, the headside being blunt with a convex surface, were found in Kodumanal [78]. These may be spindles used for spinning cotton. This was made by iron. Even now, the Chemmimalai and the surrounded places were famous for textiles. Generally Kongu was famous for its cotton and textiles. This was becaues of its raw materials available here and of the claimate. This was possible, if it had its attempt in early periods.

At Alagarai textile materials have been excavated. At

Tirukkampuliyur textile materials have been unearthed particularly bunch of silk threads . This shows that the textile industry had strong supporting evidence for the textile industry. This may ~~answer by~~ be useful for future excavations, Blouvampatti excavation yielded more that 20 spindle whols[79].

COPPER :

Comparing other things, copper was found only in limited quantity. Mostly it was confines to small objects like spindle, needle, hook, ring and ornamental pieces. At Tirukkampuliyur, bangles the rings antimony rods and the broken piece of a rattle was excavated . Alagarai yielded toe rings or finger and small thin rods. The rings have diameter ranging from about 2cm to 5am. Some of the bigger rings would have been used either as ear rings bangles.

In Kodumanal megalithic, there were two bowls, very fragile in condition one side and the other bowl had a hole in the centre [80]. There was one capper object moulded tiger figurine with clay work. It is 8cm in length and 5cm in height. The inlay work consists of precious stones jasper and lapis lazule inset in triangular cavities and in the two eyes. Along with this, two copper or bonze in Adhichanallur also. In megalithic a copper ladle which was made by forging two separate plates together.

There were also found two fine ear rings made of copper spiral with hook attached [81]. A small bell , stopper with a flower knob and a deforded rim of a plate or bowl are the other objects worth mentioning. At Boluvampatti a small bull and plough were collected.

GOLD AND SILVER :

Gold and diamond were also in demand besides beads and pearls in Aryavartha. We have the authority of Kautilyas Arthasastra for the fact that in the fourth century B.C. there flourished trade, between South India and North India in shells of all kinds including mother of pearls and gold which were available in plenty in Dakishinapatha [82].

There are evidences for the richness of gold in Kongu. In literature there is a reference for `Kongu Gold' which was used for Chithambaram temple roof [83]. Also there is a reference of shifting gold from river sand. Gold must have been brought from Kolar region. Kolar gold had travelled even to Indus valley [84]. Here the gold digging has a long history. F.R.Alchin opines that the neolithic people was the first who located gold and dug it from that period gold was unearthed in Deccan and Southern Deccan [85]. Gold was also brought to Kongu from Deccan.

Gold things are rare in the excavations. Very small objects in gold are found. May this gold be highly demanded as like other mineral wealth. But silver ones are proportionately more in quantity in Kodumanal [86]. In the megalithic burial two solid spiral rings of gold each weighing about two grams were found. Another spiral of five loops with a diameter of 1.5cm was ivory fragile and was made of an copper wire covered with gold foil. In Boluvampatti some Terracotta fingurins are also excavated by the archaeologists [87].

From Kodumanal and Boluvampatti habitation sites only from silver punchmarked coins were found [88]. In Megalithic, silver ornaments were found in fairly good quantity. twentytwo small spirais of silver with three of four loops each were found along with a big collection of carnelian beads. There was a big 6.4 diameter spirtal of several of loops made of 3 mm thick silver wire also unearthed. This must have been a bangle. There were two rectangular bar like pieces. Twentythree mm in length, threemm in thickness. They were actually hollow inside and had six holes breadth wise. Another triangular hollow piece had 5 holes on one side and open at the opposite corner. All those three pieces were obviously moulded ones and must have been used for preparing garlands of beads using multiple threads simultaneously. In Boluvampatti 3 small

gold thin antiques found. One is leaf like object used in neck ornaments or necklace other one is small strick, length 2mm.

Tortoise-Shell:

The Romans had a great liking for tortoise -shell from the Indian Ocean but the best tortoise -shell came from Suvarnadvipa. In Rome it was used for veneering. The tortoise shell was exported from Muziri and Nelcynda [89]. It was available in Srilanka and other islands and was purchased by the Greek Merchants.

Herbs:

Rome perhaps imported lac from India, Siam and Peru. Some Indian herbs were used as medicine in Rome. Owing to the difficulties of communication their cost was very high [90].

Silk :

Many articles of trade passed through or were directly exported from Tamil ports to the Roman empire and to other regions of the west. The transit goods, some of which also entered the internal exchange of Tamilakam were spikenard from the Ganges region, silk

from China, tortoise shell from southeast Asia and the islands near the Kerala coast. The Tamil sources refer to silk as pattu [91]. Hower such references do not indicate the direction or region from which it come to Tamilakam. The periplus points to China as the region from which silk reached the Ganges valley, from where it may have reached Tamilakam down the east coast to the Tamil ports, and then was sent to the west. Silk entered the internal circuit of exchange through gifts by rulers to panar (bards) and as a luxury item of the ruling and urban elites attire.

Cardamom :

Spice a major item of export came predominantly from the western hills of Kerala, particularly pepper and cardamom [92]. However, with the increase in the demand for spices were also procured from southeast Asia and sent to the Tamil ports to be shipped on to the west. Fragrant woods, although available indigenously, were also a part of the transit trade, for they came from southeast Asia, in addition to those from the hill regions of South India.

Cardamom exported to the west is found in Travancore, Malabar and the highlands bordering the districts of Madurai, Tirunelveli and Dindigul. However strangely enough, there is hardly any direct reference to cardamom in the Tamil sources, although it is well known to the classical accounts.

'Argaritic' muslin :

Although 'Argaritic' muslins from Uraiyur were in demand in the Roman world, Tamilakam imported the Kalagam and Kalingam (two varieties of fine fabric) from Burma and Kalinga respectively [93]. This would also indicate that the trade in textiles grew in volume and Tamil ports exported both locally produced 'Argartic' fabrics and those for transit [94]. These fabrics also entered the internal circuit of exchange, mainly through gifts to poets and bards. A variety of thin cloth from Egypt is also known to have been imported in addition to kalagam and kalingam [95].

Cotton fabric :

Cotton fabric was the important manufactured item of export apart from jewellery, produced both in the Cola and Pandya regions. While the Arthasastra refers to the fabric from Madurai in the Pandya region, the periplus refers to the 'Argaritic' muslins of Uraiyur in the Cola land [96]. The Tamil sources refer to several varieties of cotton fabrics. Muslin was a fine cotton cloth. It was woven in Tamilakam and resembled steam or vapour and had so fine a taxture that the trades could not be easily traced. It had fcoral payyerns. It was in great demand among the Romans. The Silappadikaram refers to

thrity two varieties of cotton fabrics [97]. Archaeological evidence in this regard is not highly illuminating although the occurrence of terracotta spindle whorls in Kunnattur, Odugathur and Sanur and in Kodumanal, dyeing vats in Arikamedu, Vraiyur and Vasavasamudram seem to indicate their manufacture an a considerable scale [98].

Beryl :

Although variety of gems seem to have been exported from the Tamil ports, the evidence on muttu or oearls is direct and indisputable. Of the other gems, beryl is known to be an important item of export, although it is not mentioned in the Tamil literature itself. The beryl mine of Padiyur in the coimbatore district are well known. Beryl mines have also been located in Vaniyambadi in the Salem district and additional sources were tapped by the second century A.D. perhaps in the days of Ptolemy when Punnata near Melkote in Karnataka and Sri Lanka may also have been explotied [99].

Excavation in the Coimbatore region have brought to light six - sided beryl prisms which have been interpreted as evidence of exchange of beryl for Roamn coins. It is not clear whern and how beryl entered long - distance trade. The Arthasastra mentions vaidurya (beryl) which accerding to the commentators, came from the southern

mountains [100]. The term vaidurya may well have been a Dravidian Origin. It is also probable that the Greek word for it berullos is derived from vaidurya.

Betel leaf :

Malabathrum 'from the interiors' was another export from the west coast and has been identified as betel leaf or cinnamon bark, although it is said to be of inferior quality when compared to that cinnamon from China, Sri Lanka, Southeast Asia and the Himalayas [101].

Nard :

Yet another item of export which figures along with malabarthrum seems to be a grass or leaf (may be lemon grass) found in the Chera region. It was used to extract an oil, a fragrant one, for cosmetic purposes (Cymbopogam Nardus) and the Seleucids are believed to have attempted to naturalisze it in their country. It was known to Pliny and the periplus as the sweet-smelling oil of the Nard-the word probably derived from Narantam in Tamil [102].

Forest Products :

Among the forest products, words of all sorts- ornamental and aromatic -entered this commerciaql network. The most notable were

sandalwood, teak, ebony and eaglewood, most of which grew in the hilly tracts of Coimbatore, Salem, Malabar and Karnataka. None of them however , is listed among the exports from the Tamil ports by the Periplus[103]. Though the forests of Central India could have been tapped, the forests of Tamilakam may also have been a major source.

The imports to South India, several of which are known from the periplus, consisted of coin,topaz,coral,thin clothing and figured linens, antimony, copper,tin and lead, wine, realgar and orpiment and also wheat, this probably for the Graceo-Romans in the Tamil Ports wine is the most conspicuously mentioned item in the sangam works in a variety of contexts, particularly in connection with the ruling and urban elite[104]. Roman wine was very popular with the Tamils, who were familiar with its quality and fragrance.

Horse :

Horse, for the breeding of which the southern ~~cliate~~ climate was not conducive, ~~ahve~~ have always been imported into South India, mainly from the Arab countries. the pattinappalai refers to milk white steeds improted into Puhar, while the Meduraikkanci makes a reference to their import to the Pandyan ports. The Tondainadu port of Nirppeyar received horses in ships. Horses were also gifted by rulers to bards. Horsebits

or articles associated with the use of horses are reported in the early leavls of excavations at Sanur, Kunnattur and Adichnallur [105].

The Hebrew thuku (peacock) is derived from the Tamil thokai. the Hebrew ahal is derived from the Tamil ahil [106]. The Hebrew almug is derived from the sanskrit valgu and the hebrew Koph(monkey) from the sanskirt Kapi [107]. The Hebrew Shenhalbin (ivory) has been derived from the sanskirt Chhadonta [108]. The Hebrew saden has been derived from the Greek sindon and the sanskirt sindhu. It is also possible that in the 9th century B.C . Indian elephants were exported to Assyria. On a obelisk of Shalmanesar III an Indian elephant has been represented [109]. It is called baziyation in the inscription which may be a form of Sanskirt vasita, a synonym of the cow elephant. Scholars are of the opinion that the Indian elephants went to Assyria through the Hindukush route.

Babylon had perhaps a small colony of the South Indians. From the business tablets found from the house of Murushufrom Nippur, it is evident that the house was carrying on business in India [110]. It is perhaps due to commercial relation that some words of tamil origin as rasi(rice, Greek oryza), Karur(Cinnamon, Greek karpians), injiber(dry ginger, greek jigiberos),long pepper(Greek pepari) and sanskirt vaidurya(crystal, Greek peryks) entered the Greek language

Oil

Gingelly oil which we know from the periplus was regularly exported from India in later times[111]. Anotintment was a ceremony undergone by kings and priests and the ril was also required for making unguents with In egypt and syrid there were manufactories where these unguents were prepared.

Hounds :

Indian hounds were much valued by foreigners. According to Horodotos, the Persians of his time caused the supplies of four large villages in the plains round Balylon to be appropriated for the feeding of Indian hounds[112]. South Indian hunting dogs were well-known for their ferocity. They were usually described as kadanay the fierce hound, and were kept enchained.

Serpents :

Serpents inculding the cobra called Aspis by the Greeks and the Python werer others of the living animals exported[113]. Strabo saw in Egypt a serpent nine feet long brought from India.

Of the articles that were importted into the Roman empire from India, there is ample impormation in the Greek and Latin books of the period.

The Stress was undoubtedly on the export and import of elite and luxury goods such as horses, gold, gems etc, which were meant for elite consumption and not for local exchage chiefly families acquired and used them for exchancing their status and prestige and legitimised it. by conferring gifts on poets and bards. The importance of primitive valuables has been stressed for their socia-political significance in early socities.

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TRADE CENTRES

TRADE CENTRES

Indian History speaks the rise and fall of the three different periods of Urbanisms. The first is said at the time of Indus valley Urbanism[1]. Second from 5th Century B.C. to 4th Century A.D. and the thrid one is at the medieval time. These three urban growths are different in their character and also it is considered that there is no interlink between these three periods. Regarding the Indus civilisation we can say it never infuluenced or helped in the Gangetic Valley urban development. The raise of urban centres between 4th century B.C. to 4th Century A.D. were independent in character. This is because of the foreign trade. Romans, Greeks and the Sri Lankan traders influenced in this period. Because of this the small market places became well know urban centres.

R.S. Sharma in his work [2] explained the raise and fall of urban centres in between 4th Century B.C. to 5th Century A.D. In his work he states how the internal and external trade helped for the growth of ancient urban centres and also about the urban development in south India. He explained Arikamedu in detail because his work based only on excavation report [3]. Punnampalam Ragupathy also worked the early settlement in Jaffna.

Magalithic monuments help to get the knowledge about the political and social life of the Sengam people. Megalithic excavation tells the occupation of the people such as agriculture bead making industry and trade. Hundreds of artifacta are excavated in this megalithic burials. Among those potsher some bear grafiti like Swesthik, sun, moon, star, fish, bow, comb etc are said to mention [4]. These excavation materials speaks about the life of the various clases.

Not only in megalithic but also in Sangam literature the `Kudi' is mentioned[5]. In Sangam literature it is said certain areas are called cil kudi' and `cirukudi' [6]. Sudharshan Seneviratne worked as `Pre state to state socities in Tamil Nadu. The result of this research may help to rewrite the society of Tamils.

We can come across `Kudi' in all the Dravidian languages[7]. Thoda which is one among the Dravidian lanugage gives several meanings for Kudi, Kulam, father's clan are meaning for Kudi [8] Thoda language confirms that ancient people and animals lived under one roof. In Payampalli houses of megalithic people were excavated. These huts are constructed with mud walls and like round Buddha stupa.

In Marutham `Ur' means the place where group of people lived. Nagaram, Pattinam, also metioned. Even though the Sangam

literature speaks about the various people lived at various places but it did not help us to know about development of culture the real nature in the `Kudi' to `Padi' and `Ur' to `Urban'. But cultural antropology shows the development from nomadic to pasture and to agriculture and finally to urban raise. The results of anthropology helps to identify the raise of urban centre and trade centre.

Because of trade and also other geographical conditions the ancient people may settle at a particular place which is convenient for them in all their day to day activities. Before this they were just nomads for want of pasture lands they roamed. After entering in other activities such as producing food (in river beds) and other commodiies, they started to exchange their excess products. This terms as gift trade and their settlement developed as urban centres.

Urban system is the outcome of internal factors. The initial urban growth of a major centre is based such as long distance trade and not upon purely internal demands.

Accoding to O.P. Bharadwaj pre modern urban development under goes 7 stages. Such as (1) Preurban (2) Urban with weak links with other ares (3) state city (4) imperial city (5) standard marketing (6) intermediate marketing and (7) national marketing [9]. With the help

of available materials we cannot bring out our ancient urban sites in these above mentioned categories. Ancient urban sites had a close link with Roman countries. This trade even collapsed the Roman economy. So, urban centres of our period had international marketing places.

We can identify certain diagnostic marks of urbanisation. Coins have been unearthed at numerous sties and constitute a striking mark of the urbanisation of ancient settlements. Money was the symbol of urban prosperity and its shortage was an indication of disintegration of urban life.

Pottery - The higher material culture is attested by the use of the sophisticated types of pottery. Both internal and external make clearly shows their contact with outer world. There is a possibility of pottery industry in certain sites. Hence the disappearance of fine pottery is a symptom of urban decline. Many dies made of stone, bone and terracotta possibly used by goldsmiths come from various sites proves the development of their period. Probably there was some trade in terracttas between important urban centres. This can be said on the basis of exact similarities between tercottas belonging to distant urban sites.

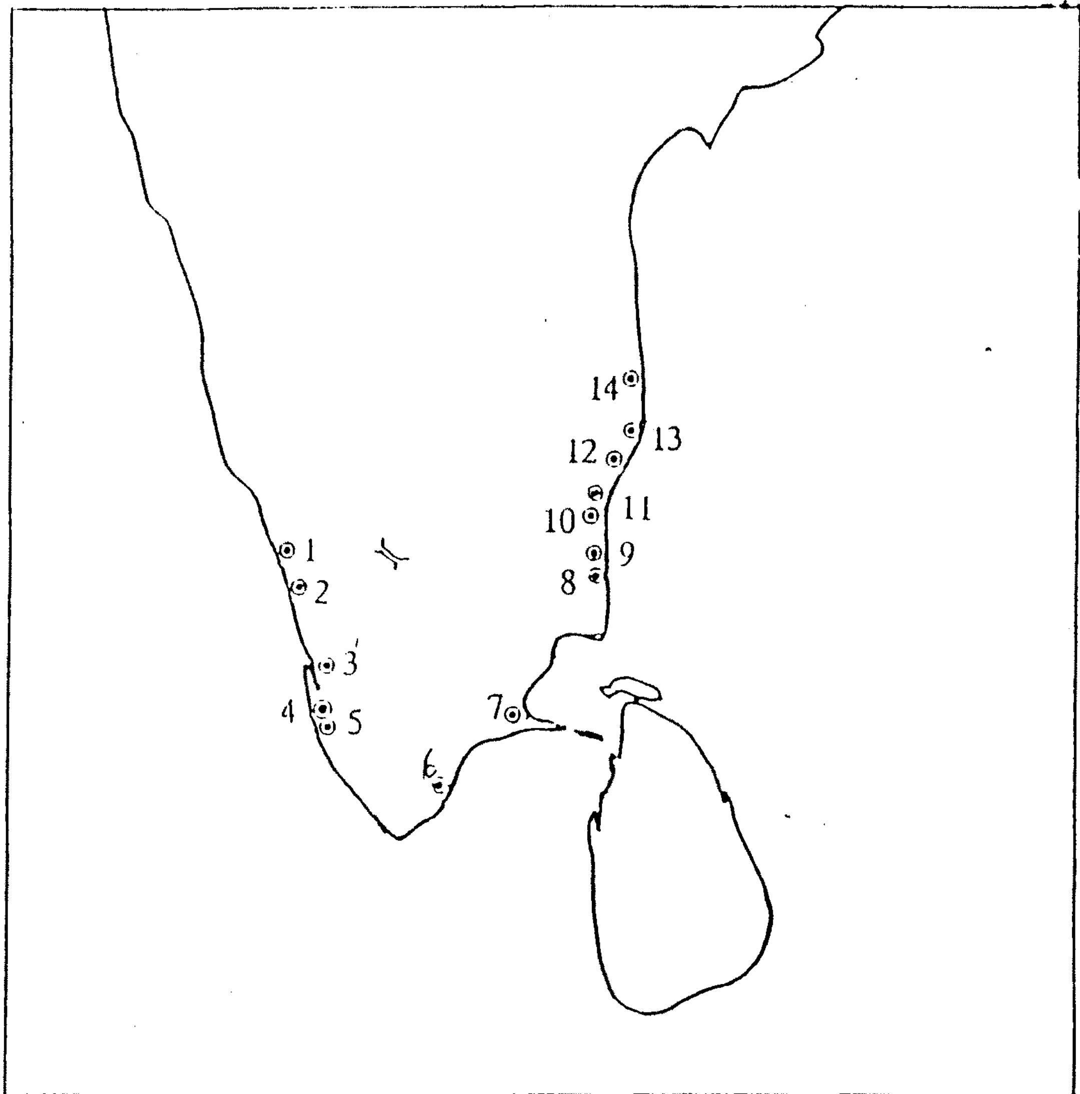
In the first two centuries of the Christain era some crafts such as the making of stone beads manufacture of shell objects and above all fabrication of ivory and glass goods reached their peak. Significantly enough after the 4th century archaeological evidence for such trade is lacking.

Some ancient urban settlements were indulged in the production of iron artefacts. Crucibles, furnances and iron slag indicating the casting of iron tools are quite impressive.

There are enough foreign coins and pottery to prove close and continued contact between Tamil Nadu ports and cities on the one hand and foreign countries on the other. The above stated are certain diagnostic makrs to identify urban centers.

So far more than 100 megalithic sites have been identified We cannot say that all these sites as urban centres. There are many reason fro this. First only few sites are excavated like Kodumanal Alangulam, Arikamedu etc. Secondly there is no habitation sites near certain megalithic. So, we cannot say those megalithic sites as urban centres. In future there is a possibility to establish and prove so many urban centres like Deccan and North India. But now we can reconstruct the urban centres only upon the few excavation sites with those unearthed materials.

ANCIENT PORTS CONNECTED WITH ROMAN TRADE



Ancient Port	Modern Name		
1.Naura	Cannanore	9.Karaikadu	Karaikadu
2.Tyndis	Tondi	10.Poduke	Arikamedu
3.Muciri	Muziris	11.Sopatma	Marakkanam
4.Nelcynda	Kottayam	12.Vasavasamudram	Vasavasamudram
5.Bacare	Varkkalai	13.Mamallapuram	Mamallapuram
6.Kolkhoi	Korkai	14.Manarpha	Mylapore
7.Alagankulam	Alagankulam	Palghat pass	
8.Camara	Kaveripumpattinam		

Alagankulam may be identified with ancient Saliyur.

The following are the important urban centres in Tamilnadu in ancient period. Most of the sites are near the coastal area or near river banks. This proves the people's geographical knowledge of that time Water becomes one of the easiest means of communication to them. Alagankulam, Arikamedu, Korkai, Kaveripattiam (Poompuhar), Vasavasmudram, Kadal Mallai, Marakanam, Nagapattinam, Devipattinam, Kayalpatinam, Uraiyur, Tondi, Muchiri, Kodikari, Kadumanal, Tirukampuliyur, Karur, Boluvampatti, Avinashi, Kanchi, Chengam, Vellalur - these are the important urban centres. Among these Alagankulam, Arikamedu, Korkai, Poompuhar, Vasavasamudram, Uraiyur, Kodumanal, Karur, Tirukampuliyur are excavated. Remaining sites are not fully exacavated. Unearthed materials show the clear picture of ancient Tamilnadu with Roman contacts. There is a well flourished foriegn trade prevailed at that time. This was supported by the literary evidence and foriegn authours notice also. The materials excavation in all these sites are more or less belong to same period. So they will have contact with one another urban centre.

Excavated Evidences :

Nearly 25 years excavations are going on in Tamil Nadu, Karur, Uraiyur, Puhar, Boluvampatti, Kanchipuram, Korkai, Vasavasmudram, Arikamedu are important places, where we get enough information to prove that these are urban centres.

a
Except few, most of all the excavated sites are belong to sangam age. These excavations also not in a large area, it covered only small area. So it is difficult to map the raise of urban centre till the decay. These excavations shows the urban history of ancient period. Which show the urban people from 7th Century B.C. There are no data to identify the settlement before this period data to identify the settlement before this period [10] So we can very well say the permanent settlement starts atleast from 7th Century B.C. onwards.

Tamilnadu occupied the stratergic place in the world trade map. It is situated between eastern and western countries. It is easy to contact both the world. Sea routes went around the world by touching of Tamilnadu. So trade centres and urban centres started to raise in 2nd Century B.C. onwards. Eastern seacoast covers the important ports like Korkai, Pukar, Alakankulam, Arikamedu, Sopattinam, Mavilangai, Vasavasamudram, Mamallai and Mavilangai Naravu, Manthai, Vanchi, Musiri are located in the western coastline of Tamilnadu.

Naravu:

Naravu is mentioned as `Cudanaravu' in Patirrupattu [11]. It is considered both Sangam text Naravu and Naura are smae as attested by periplus [12]. Ptolomy says this is the first port on west coast where as far as Damirica was concerned [13].This is said as a wealthy

place because of the arrival of Yavana ships. Periplus refers to as navra and Pliny's work mentioned it as Nithris [14], which refers this Naravu. This is identified with Mangalapuram situated in Nethravathy river which is now in South Karnataka [15]. Deccan which is north of Tamilnadu is said as Ariyakam[16]. Naravu situated Southern end of Ariyakam.Here who ceralatham from Dhandagaruyan who lifted sheeps and Ilancheralirumporai are said to have ruled this place [17].

Manthai:

Only in Sangam literture this place is said as coastal centre. Some of the Sangam works speaks about this centre [18]. It attracted many people. Chera ruler collected tributous from other rulers in Manthai[19].

Elil Kundram :

This is called as Elil Malai and Ramakundam [20]. Today it is situated in Magi which was French colony. Gold is taken from Konkan country which is around this mount, as atteated by Sangam text [21].Aagnanuru speaks about the `Pali' a Nagaram situated in this country [22].`Param a nagaram also under Nannan[23]. It is a wealthy place.

Poozi Nadu:

Next to Chera Nadu Poozi is situated for sometimes it was under

Cheras. In Pattirru Pattu it is mentioned [24]. Pooziar lived by cattle breeding and bead making. Strabo says that Indo-Greek ruler Drimitris extended his army till Cheranadu and Poozi Nadu in west coast[25]. This is to occupy the trade centres of Tamilnadu in west coast under him. This cities were recovered from Indo Greek ruler is said in Pattirupattu [26].

Tondi :

In sangam text it is mentioned as Chera city. Sangam literature says Tondi was surrounded by paddy fields [27]. In foreign notices it is explained a well known trade centre and many yavana ships visited here [28]. Silapathigaram and Agananuru speaks about Tondi. The goods which are exported to Tondi and from Tondi it went to Madurai. Excavation proves that it was a Sangam age site. Shell beads and black and redware potteries are excavated.

Musiri :

In Sangam literature it is mentioned as trade centre Yavana ships arrived here to get pepper in exchange of their gold [29]. Ptolomy and periplus refer to about Musiri [30]. According to Periplus, Greek merchants from Egypt brought wine, brass, lead, glass,etc, for sale to Muchiri (Musiri) and Vaikkarai (Bakara) and who purchased from these ports pepper, betel, ivory, pearl and fine muslins.The Greeks sailed from Egypt in the month of July and arrived at Muchiri in about forty days. They

stayed on the Malabar coast for about three months and commenced their return voyage from Muchiri in December or January.

Kutta Nadu :

People who lived here is called Kuttuvar [31]. Bead making industry and cattle breeding are their occupation. By this these people are wealthy. These beads might have bought by Yavana trader Ptolemy mentions this Kuttunadu [32]. He also speaks about Nelkienda [33]. Aynadu is mentioned by Ptolomy [34]. This Aynadu people may also involved in trade with

East coast centre :

From Sangam literature and Ptolomy work we get informations about east coast trade centres. Periplus did not give much details about this east coast. Korkai, Alagankulam, Marunkur Pattinam, Puhar, Puduke, Sopatma, Mavilankai, Vasavasamudram, Mamallai are noteable centres. Among these Alagankulam, Korkai. Puhar, Puduke, Vasavasamudram are excavated. Among this Korkai and Algankulam are dated to 7-5th Century B.C. Northern Blackware pottery are excavated at Korkai [35].

Alagankulam :

It is Situated in Ramanathapuram, northern bank of Vaigai.

The excavation gives so many evidence to construct that, it was a well flourished urban centre. Large number of Yavana potsheds were unearthed. A potsherd is inscribed with graffiti mark 'Thisan'. It is dated 1st centuary A.D [36]. This is in Srilankan Bhrami letters. This proves, there must be a close and regular contact with Srilankan traders by our traders. The place where this trade centre situated is also proves the contact with Srilanka.

Iron furance is excavated [37]. Large number of crucibile which are used for iron melting is excevated. Melted waste iron slags are excavated. The un earthed beads reveal the possibility of bead industry here. Raw material may be taken from Nilgiri [38]. Carnelian beads also excavated Northren blackpolished ware are excavated. The date of this site is earlier than 5th Century B.C. This centre flourished as a trade centre till 4th Century A.D.

Korkai :

This is mentioned in Sangam literature in various ways [39]. It is know for pearl port trade centre and capital for Pandian rulers. It is situated on the banks of Tambrabrani river.

Its early date is 7th Century B.C. Black and redware potsherds with Brahmi letters are excavated [40]. These belong to 2nd

century Ptolomy refers that place as Kolchi or Colchi and says that it was an emporium [41]. Periplus says "From comari towards the north this region extends to cokhi (korkai) where the pearl fisheries are and it belongs to Pandian kingdom [42]. Ptolomy visited Korkai in the 2nd century A.D. He also speaks about the pearl of Korkai and their export [43]

Ancient port town of Kaveripatinam extended from Puddupuram north of Kannagi statue at Poompuhar as far south as Vanagiri, where the Kaveri presently joins the sea.

Ancient township of Poompuhar of 3rd Century B.C. indicated by the brick wharf of Kilaiyur was destroyed by the sea and as a sequel to the transgression of the sea the township was shifted landward in the 2nd, 3rd Century A.D [44]. It extends Vanagiri, Pallanewaram and Velliyan Irupu. Ancient city of Poompuhar was not confined to the present mouth of Kaveri near Vanagiri. Terracotta ring wells and jars were discovered between Vanagiri and Tranquehar dated 1 - 5 century A.D .

To place brick structures in the first few centuries before christ because they are in 5m depth whereas Tirukampuliyur ring wells are almost on shore. c^{14} date of the brick wharf of Kilayur onshore, excavated by the archaeologists in the sixties is 3rd Century B.C .

Puhar :

Kaveripattinam, Poompuhar, Tranquebar purananuru explains the goods in this trade centre for trade. Ptolony and periplus refers to Puhur as Kaheris and `Kamera'[45]. There was a colony for Yavanas or Greeks called Yavanarirrukai[46]. The date for this centre is 3rd Century B.C.

Kilaiyar a part of Kaveripattinam. Here beads, semi-precious stones and amphoraepieces are excavated[47]. Significant discovery is an I shaped brick structure exposed in the ancient channel of Kaveri at Kilaiyur which is now completely sitted up Carban date is 316+103 B.C.

The brick structure with a drain for water flow and a platform supported by wooden posts for handlingcargo served as a what built in the channel of the river Kaveri[48]. The Sanskrit scholars called this town as charitrapura[49].

Tranquebar (Taranambadi) which was a satellite port or suburb of Poompuhar. The city of Puhar takes shape and form under the spreading light of the eastern sun open terraces, the harbour with its various machines the top rows of windows of tall mansions shaped like the eye of deer, the distinguishable dwelling places of the Greeks and the Romans eye catching in their different type of architecture, the seaside colonies of many foreigners at home attracted to the city of Puhar

by its seaborne trade become visible in the enveloping light of the sea [50].

It itinerant sellers of aromatic oils and unguents, of various sweet smelling powders & sandal paste, of flowers in packets were singly displayed or strung into garlands of famed perfumes delicately compounded and mixed are already busy crying their wares in the streets. There are also weavers of animal fur, silk and cotton displaying their multi-coloured goods to those interested. There are also those who deal in coral, sandal, myrrh, jewelleries of many kinds, of gold of surpassing purity, of precious stones to be set in jewels who were busy going about crying their own places. And there were the grain merchants who displayed grains and pulses in mounds in their markets. Carriers of readymade morning foods were busy doing their trade. To-day selling fisherwomen raised their voices in a strident recognisable cry. Vendors of white salt, of fish fresh from sea and river were crying their wares. Here were to be found meatsellers with kids and other flesh in plenty. The betel chewers had already begun their days destruction of betel leaves chewing them with appropriate accompaniments.

Workers in bronze, copper, gold and strong iron were busy in their respective places so were the skilled workers in wood, hewers and splithers, carvers and makers of furniture in traditional or new

patterns they had begun their day's work. They had always a lot of work on hand. Workers in pith, makers of dolls from rags. Painters of clay, goldsmith and those who work in gems polishing or setting them to work a greater harmony, tailors and tinkers, leather craftsmen,all were busy. There were modest handicraftsmen busying themselves about their handworks which would bring them their day's food, if they were lucky. Each had his own allotted quarter in the part of the city, this street for this craftsmen, that street for that workers or artist.

There lies the broad royal road for the use of king and nobles. There is the wide road on which festive days the temple's decked wooden car is dragged with pomp and ceremony and pipe and drum with plays flying and streaning banners. There is the bazaar continue to be busy till night is far advanced.

Adjacent to the bazaar is the street of the merchant princes of proud lineage whose mansions are tall, each with a lower or high, stately and of immense properties. Beyond are the residences of the learned ones the Brahmins of the city, but their residences are of modest proportions though wellkept. Beyond the street of the Brahmins lie the street of the formers, they who love to till the land making it yield rich harvests enough to feed the people of the city and the kingdom. Beyond that lie the streets of the Ayurvedic Physicians who know all about

human illnesses and can cure some of them for a fee or for love. The street of the Astrologers who can consult the stars and predict what year even though there is no certainty that it will happen as they predict lies beyond that of the physicians. They are well ordered and set apart and self contained, each in its places.

The counch workers of Puhar are famous throughout the land and can turn out a delicate bangle with great skill and labour. They manufacture things that are ever in demand among women folk.

On the other side, between the dwellings of the workers and the street of the workers and the streets of the rich, lies the open market place. It is the Day Market where the sheds are set up with live trees for pillars. It is on open area vast and wide the only sound of battle we are likely to hear where is the battle of the buyers and the sellers quarrelling about the prices of merchandise. There is nothing in the world that you can not buy in the Day market of Puhaar if you pay the price[51].

Veerai :

This is also one of the coastal city. Aganaunuru says salt manufacture in the important occupation[52]. It is considered that

Arikamedu is the Sangam age Veerai [53]. But it must have situated at the coast of Tanjore district.

Arikamedu :

Ptolomy's work states, 'Puduke' is situated north of Puhar[54]. Puducheri may be identified with Puduke [55]. The excavated materials proves it was a well known and well flourished trade centre. Building structure and tiles roof are explains the urban life. Brahmi letters shows the presence of north Indian traders and Buddhist traders [56]. Roman potties gives the clear cut evidence of the yavana settlement here. Pottery with graffti marks as 'Valavan' [57] is dated as 1st Century B.C. Shell bangles, beads, handloom materials, etc are excavated. These are dated in the time bracket 2nd Century B.C to 4th Century A.D [58].

Mavilangai :

Ptolomy states this as a well flourished trade centre . This is also stated in Sirupannarrupadai. Eeyilpattinam is also mentioned in Sirupanaarrupadai as trade centre [59]. Ptolomy's Soptma is identified this Eyilpartinam [60]. Now it is called Cadurangapattinam and Satras. All these trade centres are under Nalliya Kodan a velir chief. With Ptolemys evidence P.T. Srinivasa Iyengar states this Mavilangai is the capital of Aruvanandu, was one of the four dynasty. Other three are Kerabothros (Keralaputra of Asoka), Pandian, and Sorongos with

capitals, karur, Madura and Uraiyur [61].

Aruva Nadu :

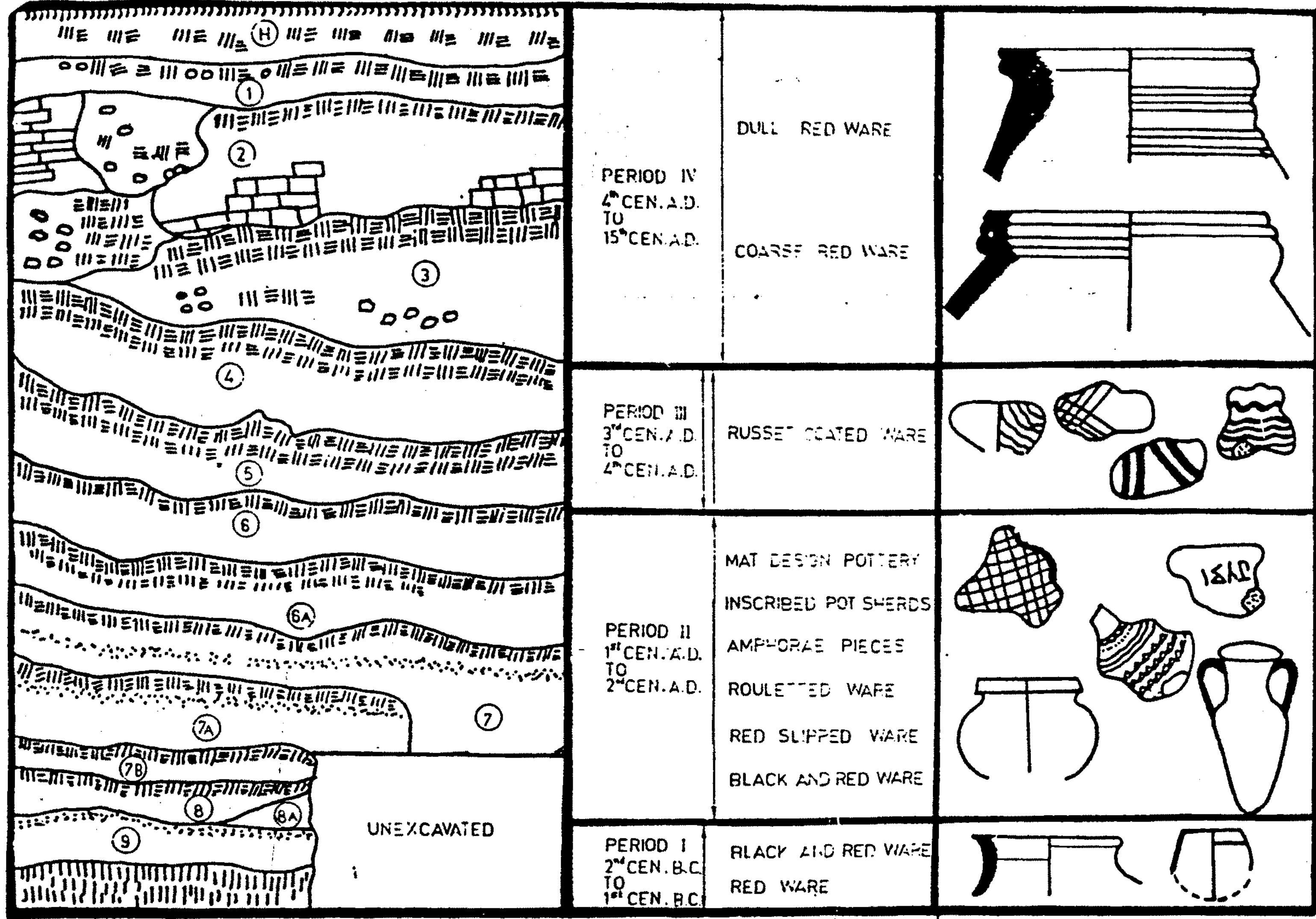
North of Mavilangai so many coastal centres are located. Vasavasaamudram, Mamallai were their trade centres as attested by excavations [62]. All these are situated in Aruva Nadu. Pattinapalai mentions these places [63]. In a Buddlist stupa dated 1st century B.C. written in Brahmi letters as Aruvaka Kulaanisyer [64]. This Aruvalar led their life as traders.

Thagadur :

It is the capital of Adiyaman. The major trade route went into Vadugar country touches Thagadur . So, it may a well flourished trade centre. Agananuru say that people of various languages lived here[65]. They had settled for trade. Punch marked coins and Roman coins are excavated [66]. Cattle breeding and bead collecting are their profession. This led them to live like nomadic people in their home town. This processds till 5th-6th CenturyA.D.

Karur :

In Sangam literature it is known as Vanchi [67]. This city situated along the important trade route. So it was a well flourished



CULTURAL SEQUENCE OF KARUR (KRR.-6)



GOLD - ROMAN RING.



TIGER RING.

trade centre. Agananuru starts this as 'Thirumaviyanagar'[68].

By excavation report it is stated that Karur flourished as a trade centre between 2nd century B.C. to 4th century A.D. Roman coins, jars, black and redware potteries, red ware, beads are excavated[69]. These are belonged to 1st B.C. century to 3rd century A.D. Spindle show it is well known textile centre. Tamil Brahmi inscription with letters "Ponvanigan Nathi" is noticed at Arnattarmalai and it belongs to 2nd century A.D[70]. Satavahana's kailoin pottery pieces are also unearthed[71]. Ptolomy explained clearly in his book about Karur. He says that Karur was the Royal seat of Chera botras and famous emporium[72].

Vellalur :

It is near Coimbatore thousands of Roman coins are excavated. These coins belongs to 1st B.C. to 4th A.D. issued by Roman rulers Agastus to Vellentnie[73]. A ring with Roamn women picture and a golden plate are note worthy. This may enough to say that it is a centre where often Romans visited and stayed, here.

Podini :

Palani is known as Podini in Sangam literature[74]. Near Podini in C.Kalayamuthur, Roman coins are excavated[75]. Podini

situated in the important trade route which links Palghat to Madurai. So it flourished a well knows trade centre.

Vadabudhinatham :

It was situated on the trade route between Palgat and Madurai. More than thousand Roman coins are unearthed. These coins are made of gold, silver, copper [76]. This proves, it is well known trade centre. Beads and pepper may be the trade goods to Roman from here.

Anaimalai :

Number of Megaliths are identified here. Near Anaimalai in Singanallur, forty Roman coins are unearthed from a megalithic burial. It is made up of silver and belongs to Tybirius, who ruled Rome during first century A.D [77].

Pollachi, Vellanthavalam, Dharapuram, Savadipalayam, Kulathipalayam, Kathangani are the places, where hoards of Roman coins are unearthed [78]. So we can say that they may once flourished a well known trade centre. There must be a close contact between Roman country and Tamil people.

Koval :

Modern Thirukolilur is known as Koval in sangam literature. Koval means Mullai land [79]. This lies upon the north Indian route near



1. திருக்கோயிலூர் அருகில் அண்மையில் கிடைத்த ரோமானியத் தங்கக் காசுகளில் சில. ஒரு காசில் மயில் உள்ளது காண்க.

Koval on the Bank of Pennai, Variety of coins are unearthed. These coins belong to Chera, dated 2nd A.D. North Indian Punch marked coins also discovered here [80]. This shows the contact with north India. In Soraiyapatu near Koval 200 Roman coins are unearthed [81]. There is a possibility of Roman trade here. At Jambai near Koval inscription of Adiyaman period is discovered [82]. By all this we can come to a conclusion that, there must be a close trade contact with Romans.

Arcot :

There are two Arcots located in Tamilnadu. One is on the north of Tamilnadu near Palar another one is in Tanjore. Sangam literature speaks the Tanjore Arcot only [83]. Ptolomy points 'Arckatoes'[84]. This is the Tanjore Arcot. Sangam literature also mentions this both Sangam literature and Ptolomy'swork says this Arcot as a trade centre.

Uraiyur :

It is the capital of Cholas of the Sangam age. Now it is a such suburban of town of Trichi. It is on the southern bank of Kaveri.

Uraiyur is mentioned by Ptolomy and the periplus of the Erythreen sea call the city as 'Orthura Regi Somati' and the latter as 'Argaru' [85]. In Sangam literature it is known as Urantai, Koli [86], Kolimanagar and Varaman. Chalukyan records say 'Uragapura'.



GOLD - ORNAMENT

Potteries which are unearthed here are belonger to 3rd century B.C [87]. They are black and red ware. Russet coated and painted ware, Rouletted ware etc. Twenty sherds with Brahmi inscriptions are found and dated as 1st century A.D [88]. They are similar as in Arikamedu, Korkai and Kanchipuram, various varieties of terracotta objects were unearthed like human head, male bust, female torse, toys, Gamesman, spindle whorl, dice, smoking pipes etc [89].

Beads such as agate, chalcedony, amethest coral, soapstone and crystal, glass beads, terracotta beads are unearthed glass bangles, shell bangles, bone objects, arrow heads are also unearthed [90].

There is a possibility of the growth of small industries based small capital and local people could have involved in this. Iron objects, broken rails, hooks, knives etc shows the presence of this metal industry. Kaveripattinam may act as outlet for the Uraiyur products.Rouletted ware shows the contact with foreign world. After the fall of cholas of the Sangam age in about 3rd A.D. Uraiyur and Kaveripattinam lost its identity.Tamil inscription in Brahmi character 1st A.D. links Kanchipuram, Arikamedu, Karur, and Kodumanal. Tamil Brahmi inscription found in Pugalur upto Tiruneveli district.

Madurai

Madurai is mentioned in North Indian works, foreign notices etc. Tamil Brahmi in inscription speaks about the traders of Madurai. Madurai is also known as kudal[91]. The Maduraikkanci, the longest poem in the Pattuppattu collection, and datable to the 2nd A.D. gives a graphic description of Madurai as a large and beautiful city with a place, a number of temples, two large markets and well laid out streets with lofty mansions[92]. Roman coins have been found, some in Madurai itself, while a hoard of silver punch marked coins, from a place called Bodinaikkanur, with the double carp symbol on the reverse, has been assigned to the Pandyas as their issue[93]. Recent discoveries of coins with the legend `Valutiy' or `peruvaluity' would add support to the view that local coin issues were ifluenced by the large maritime commercial transactions of the period[94].

Kacci : (Kanchipuram)

Kanchipuram, well known in history as the capital of Pallavas as early as mid-fourth century A.D., was the Kacci of the Sangam texts. In early Tamil literature Kanci is known as Kacci, Kaccimurram and Kaccippedu, the last one probably a suburb, from where a number of Tamil poets hailed. Kanci and Kancinallur also refer to the same town.



TIGER. - KODUMANAL



MAHARA RING.

The Perumpanarruppatai gives a graphic description Kacci as a Mudur (old town) formed by a number of settlements [95]. It had tall buildings of brick and was fortified by high walls.

Kanci's contacts with the world outside may be traced back to at least second century B.C, if the work of Pan kou, a Chinese writer of the first century A.D. is to be trusted [96]. According to Pan kou, the chinese emperor sent presents to the king of Houangtche (Kanci) and asked for a return 'embassy' with a live rhinoceros as tribute. Other goods like shining pearls, glass and rare stone in exchange for gold and silk are also mentioned. The journey from China took about ten months to one year through Pagan (Burma)[97].

With the Roman world Kancis contacts seem to have been indirect, perhaps through its port Nirppeyarru[98]. Although no Roaman from the region around it i.e. in Tondainadu - such as Mamallapuram (port), Madurantakam (a place called Alamporai), Saidapet and Mambalam (both in present Madras city) would point to the regions participation in the Roman trade[99].

Kodumanal :

Kodumanal the earliest trade centre was famous for beads and ornaments [100]. This is attested by Sangam literture and



TERRA COTTA

archacological finds. This Kodumanam was famous for its ornaments. At Kodumanam many antiquities which belong to the time bracket 3rd century B.C. to 4th century A.D. had been unearthed. Traders from Gujarat and Rome might have visited Kodumanal.

Kodumanal excavations reveal the fact that there are many flouring one on the other which were made in course of time. Each flouring must have flourished for 50 years time bracket. Then we can conclude that the settlement must be temporary ones. We cannot give any valid reason for this settlement patterns. This settlement survived with jem industry. Raw materials for jem industry might have been collected by pastoral cum agricultural people. In Padirruppattu, there is reference about the minerals collected by pastoral people after rains. These collection of jems and minerals find market at kodumanal.

Muttam:

Muttam was never mentioned in ancient Tamil literature. But rich archaeological finds are unearthed at Muttam. These fields can be arranged Chronologically. With support of archaeological finds, one can reconsstuct the history of Muttam from third century A.D have been unearthed there. Also punch marked coins were found. Some gold ornaments which had resemblence to ornaments in teracotta figurires are also excavated by the archaeologists [101].

Nagaram:

'Nagaram' was known for trade guild and for trade centre[102]. The word 'Nagarathar' referred in Tamil epic [103]. This shows the prevalance of trade centres in ancient times. Some inscriptions mention that the 'nagara' had been guild. Ponnivadi inscription may be cited here. This guild took part in temple administration. they were requested to maintain the gift which were given to temples. Piranmalai inscription refers to about six nagaras in Kongu [104]. Eventhough there is no enough evidence to sate the prevalance of Nagaram in ancient times, but the excavation materials proves the possibilities of Nagaram in early days.

Avanam :

Avanamarugu mentioned in Agananuru. According to Lexicon, it means market and street. Padirrupattu gives that a hunter gave ivory for his toddy credit, to toddy shop where a flag was flying (Kat Kodi nudangu avanam)[105]. This shows that there was a method of showing the selling product by flags. The word 'Avanam' was a corrupt form of sanskrit word 'Apana' - means 'people's gathering'. Apana Jeeviga was mentioned in the earliest pallava copper plate dated 4th century A.D [106]. This meant the people who lived exclusively by trade. The word may be split as 'Apana' and 'jeeviga'. Apana means market, Jeeviga means livelyhood[107].

Nigama :

Urban centres were named as Negama and Niyama (Agananuru verse 90) [108]. Nagaram was never mentioned in Tamil Brahmini Inscription. But they refer to it as 'Nigama' [109]. Arittapatti Tamil Brahmi Inscription mentions Velarai as Nigama. Scholars have interpreted the word Negama as trade centre and trader Guilds [110]. In Padirrupattu Aricil Kilar had mentioned one Niyamam, which might have been located in Kongu region (Padirrupattu verse 75) [111]. Some scholars had identified this 'Niyamam with Negamam' near Pollachi [112]. The word 'Nigama' is also mentioned in one of the Kodumanal Potsherd . We have no evidence in Tamil literature or inscriptions which enlighten our knowledge about the 'Nigama' [113], its organisation and its functioning. Hence we must turn to North Indian sources for our study about negama [114].

The prevalance of 'Negama' gives the idea that the traders formed in corporate organisation. This reveals the fact that the people were organised in various communal organisations. But there is no direct evidence to support this from Tamilnadu.

All the trade centres and administrative centres, which were unearthed so far had thrived on trade wealth. Archaeological evidence show that these places were full of jems, gold coins and foreign goods.

Hence they were prestigious places. Accumulation of wealth had reached its peak in the first two centuries of christian era. Internal restabilization of political condition and also the fall of Roman trade was the route cause of desertation of trade centres. But within two centuries trade was revived. This revival was lasted for five centuries.

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TRADE AND SOCIO POLITICAL DEVELOPMENT

TRADE AND SOCIO- POLITICAL DEVELOPMENT

In order to study the internal dynamics of socio political formations in Tamilnadu, this process may be seen in two overlapping aspects. Among these the first is the pre-conditions for the emergence of leadership viz. the structure of the existing society and economy located in association with a particular physiographic and environmental context. The second is the mechanism of control, viz. personal or individual qualities (of valour, prowess, strength and persuasive powers), the acquisition of social wealth and prestige items, traditions and cult beliefs associated with the clan or the lineage.

The earliest recognizable political instutions capable of taking more advanced forms in their evoluction seem to have apperared in the peripheral hills. It is indeed not a coincidence that there is a co-relation between eco-zones and the epithets / titles and personal names of chieftains mentioned in the Sangam texts. For instance ko, koman, Malaiyaman, neduman, kodan (from kodu), Porai perunkal are epithets associated with the montance regions. Similarly, terms such as Ay, Avi, Aviyar, Erumayuran, Erai, Kandirakko, Koman indicate a pastoral connection of these lineage chieftains. The greatest fillip to the emergence of leadership and autority perhaps came from the socio-economic interaction of the Proto Historic society. It is possible to

suggest that the beginnings of a purposeful and planned exploitation of local resources may have given a stronger basis for development of more sedentary settlement units. The process of gradual sedentarization necessitated a more intensive exploitation of local resources than under mobile economy. There are several aspects related to this development that are relevant to our study.

Firstly, kinship relations not only result in social homogeneity byt go on to provied a corresponsing concentration of households and exploitation of resources. The opposite dynamic occurs when the intergration of the household cannot contain within it demographic expansion. The predatory expansions of segmentary lineage groups have been called a social means of intrusion and competition in an already occupied ecological niches[1] and a means by which the tribe can avoid population pressure on available resources . In fact habitation and burial sites located along the banks of rivers leading from the peripheral area to the fertile lower plains were probably a result of a movement in the process of segmentation. An echo of this resource requirement may be seen in the term vanji, or expeditions led by land hungry pastoral chieftains into the forest tracts.

The second is the operation of the subsistence economy through "simple techology". Pre state societies of the Proto Historic

period developed the ability of the family / extended family as the unit of production, to control labour and the means of production, including property rights. This is primarily due to the absence of a controlling authority that allots specific tasks of production. In this context the resident kin group associated with a particular economy and physiographic region in the peripheral areas becomes significant. The lineage group which was perpetiated largely by the cross cousin marriage system may have provided a convenient social context for the emergence of leadership in association with the resident kin groups. The alliance between families and lineages perpetuated by the cross cousin marriage system made the kin nucleia `tightly integrated whole', where the intrusion of strangers was avoided and thereby ensured the hegemony or the domination over the tribe exercised by the lineage group. This situation may have had its political implications in relation to the emergence of leadership.

Titles for Chief:

The Sangam texts introduce us to a series chieftains in the peripheral areas known by the epithet perumakan or peruman. For instance chieftains such as Ori (Puram. 152), Korran (Nar. 265-268), Erai (Puram 157, Pekan (Sirupan 86-87), Erumai (Aham 115.5) had the epithet perumakan preceding their personal names[2]. Some of the

etymological derivetions of makan are son as well as husband (DED 3768). The etymological meanings for peruman also include elder brother (DED 3613). Among certain resident kin groups, if the leadership was associated with the head of the local descent group, the term makan (son) may have well implied the `descendent' of the clan / lineage ancestor. The clan graves and ancestor worship probabl;y associated with the megalithic burials may be recalled at this juncture. Apparently where leadership was claimed through descent, the term perumakan (peru + makan) may have carried the meaning `great descendant/scion.son'. Similarly, Koman (Ko +Makan) in certain instances may have conveyed the meaning `descendent/scion/son of the coherd'. The tribal, clan, pastoral and peripheral hilly territorial affiliations of a chieftain is best demonstrated by the epithets attributed to Pekan of Palani hills viz. Aviyar perunkal natan Pekan (Sirupan 86-87)[3].

The kinship network was one method by which social wealth concentrated in the hands of certain lineage groups, who may have emerged as dominant political groups in the subsequent period. Especially the cross cousin marriage system may have perpetuated a system of the horizontal transmission of social wealth (i.e. As bride price) and the subsequent veritical transmission of wealth(i.e. to the lineage group). If the chieftain took a bride from an affilicated kin village

within the trible sector, his sphere of influence over the extended kin group and an extended area may have increased. In addition predatory expansion and cattle raids offered greater opportunities for the chieftain to secure material wealth by virtue of his 'bigman' status within lineage. In fact the collection and division of booty at a feast and its distribution were integral parts of vetchi -t-turai [4]. Thus there was a concenteration of prestige items such as gold, gems, elephants, cattle, paddy, etc., in the hands of the chieftains [5]. By redistributing this wealth among warriors and travelling bards, the chieftain enhanced his authority over individuals and established a rudimentary element of inequality.

As the chieftain had a direct role to play in the acquisition of resources, this situation provided the most conducive pre-conditions for the emergence of leadership and authority. It is here that personal qualities of heroism, prowess, the ability to wield arms went to consolidate an already existing leadership or to create the clan or trible 'big man'. The element of hreoism had a fundamental role to play here. Errai, Porunan, Perumakan, Palavel, Valvel, Vauvel indicate personal names of chieftains are associated with heroism, strength and valour. It may be noted that invention of iron weapons had played a major role in harnessing the environment and gaining an edge over more backward technological groups.

The unequal distribution of social wealth was another crucial mechanisam of control. The megalithic burials and (slightly later) the Sanagam texts amply indicate that there was already an "accumulation" of prestige items and other objects of social wealth in the hands of the chieftains, and a mechanism of `redistribution' that consequently enhanced this unequal distribution of social wealth.

In this context it is quite significant to note, that the megalithic burials often entombed some of these prestige items as grave goods. Our studies also indicate that burial sites often had `special burial' where the method of construction was more elaborate or grave goods were of a special kind. In fact the very cult belief and practice of venerating the dead or ancestor worship and the belief in a life after death, saw the usage of the ritual and cult symbols to perpetuate socio-political domination. If the cult group and descent group become one, than this legitimating ritual provided a convenient psychological basis for the chieftain and his lineage group to perpetuate their hegemony over the resident community. It is not surprising therefore that lineage societies of Tamilnadu saw the titles / epithets taken up by chieftains on the one hand were used for deities and religious symbols / personages and also to identify males who wielded authority with the family / household unit on the other e.g. Ai, Aiyan, Attan, Irai, Ko / Kon / Koman, Makan, Talaivan[6].

K.N.Sivaraja Pillai had brillantly pictorised this in his work. He says "communites under the direction of Kilars of the village elders. The elderst member of the family had the direction of affairs in his hands, assisted of couses by the village assembly periodically convoked. The term 'Kilamai' means right of possessioon. This abstract concept is undoubtedly a later growth and should have denoted at first the right of the village elders of Kilavar. In course of time, the village communities grew in number and size and then they held together as a union or confederacy of a number of such communities presided over by a Vel, Ko or king. This Vel or Ko had a number of Kilars under him each representing a village. Though the Kilars and Vels were the executive heads and prididents of their respective village assemblies and confederacies and confederacies , theirr powers were probably very limited in peace time by the authority of the general assemblies of the villages. This type of political organisation was wholly the results of the peaceful and settled condition of an agricultural community, organised for peaceful pursuits. It is to these early types of communal republics that the Ashoka's edist refers"[7]

Now we have to analyse the emergence of Vels who were the first political authorities as individuals. Origion of vels still awaits a solusion in South Indian history. Raghava Iyangar, a pioneer in the study

of vels, has considered the yadavas of north as the progenetors of the vels of South India[8]. In support of this conclusion he has cited the origin myths given by Kapilar (Puram 201). Owing to the nascent stage of South Indian historiography these origin myths were taken as authentic historical narration without any critical acumen. These conclusions were accepted ones till the fifties Durai Rangaswamy challenged the conclusion of Raghava Aiyangar and maintained the indigenous origion of vels. These vels formed the peer group in lineage societyt either by selection or by election. Etymologically vel is derived from vel which means light with the extended meaning of chief as argued by Romila Thapar [9]- a conclusion putforth by Durai Rangaswamy in fifties[10]. Some scholars have correoborated the Velir movenments from north with megalithic BRW culture in South[11]. But unfortunately magalithic BRW culture in south. But unfortumately megalithic archaeology has not yielded promising evidences to confirm the velir migration from north. Also the view advanced in favour of velir as the progenitor of vellalas has no archaeological basis. Certain scholars quote evidences, from Sangam anthologies of the presence of paddy granaries in 'vels' houses and maintain their connections with agriculutural occupations[12]. But it can be argues that these paddy heaps were collected as tribute by vels from husbandsmen-an unequivocal symbiosis between the hoider chief (vels) and cultivator. But vel system must have travelled a longway from this

point. Sangam literature mentions a variety of forms of veldom. In memorial stone region incipient stage of veldom existed through out the first millennum A.D. But with the passage of time the vel system evolved new additions and diomensions and came to include all chiefs whomsoever within its brode spectrum. Though there had been an under current of changes in the vel system even during the Sangam age, the memorial stone inscriptions preserved the oldest infrastructure namely war chief.

Vel Avi (Patir, Patikam : 8th Ten : 2), Vel Ay (Puram.133 : 7, 135 : 13), Nannan Vel (man) (Agam. 97 : 12), Veliyan Venman (Agam. 208 : 5), Ay Eyinan (Agam.148, 181, 208, 396), Vaiyavikko-p Perumpekan (Puram.141-147), Ma Vel Evvi (Puram, 24) Nannan Aay (Agam. 336), Ay Antiran (Puram. 129), Irunko Venman (Agam. 36), Maiyur Kilan Vel (Patir. Patikam 9th ten), Vel Avikkoman Patuman (Patir. Patikam : 8th Ten), Velman Pitavur Pitavur Kilan makan Peruncattan (Puram.395 : 20)are some of the names of the Velir chiefs found in the body of Cankam literature leaving apart the names found in the colophons of the veres of it. Velman is a variant of the form Velmakan - a descendant of the Velir; the feminine form is Venmal, a variant of Velmakal. Avi and Ay form a branch of this velir tribe. This sub-group was known as the `Aviyar.' The words Avi and Ay are not two variants of the same word, consisting of two parts `a' (அ) and `i' (இ) `a' is the

verbal root meaning ` to form', or `to create',`i' is the suffix. In later times, the hiatus came to be prevented by the insertion of the consonant `v' (வ்) and the form Avi (ஆவி) resulted. Ay is probably a more ancient and more colloquial form. The consonant got confused at the end of a wword. But unfortunately this was looked uon as a colloquialism for which Tollkkaapiyar could not have laid down any rule. But in the form Ay where we see that the rule finding an operation the last `i' of Avi has become the consonant `y'. This is what is meant by the confusion of `i' with `y'. Therefore all those who have the prefix Ay or Avi may be taken to belong to the Aviyar group. They were so named either because they were worshippers of the Mother Goddess or because they were looked as people who form the state ot socity or who develop and grow from day to day[13].

Vel is the prefix already known to us. Irunko represents another breanch of this Velir tribe. Veliyan Venman (Agam.208 : 5) is another name. Veliyan Tittan (Nar. 58 : 5) (Tittan the son of Veliyan) and Tittan Veliyan (Veliyan, the son of Tittan) (Agam.226 : 14 & Agam. 152 : 5) are two other names. There is another word Veliman (Puram. 162, 207, 237) which occurs as the name of a chief; there is laso an Ila veliman (Puram. 162, 207, 237). Veliman must mean the decendant of the Velir. Do the Veliyans or Veli-mans represent a separate of the Velir.

Do the Veliyans or Veli-mans represent a separate line? In this line comes Aay Eyinan (Agam. 148: 7, 181 : 7. 208 : 5, 396 : 4), probably a member of Ay family. Is he the descendant of Veliyan Vel, as we see that in Agam.208 : 5 he is mentioned as Veliyan Venman Aay Fyinan. It was mentioned above that five chieftains opposed Netunceliyan. Do these names represent the namesof the individuals or the names of their tribes or subtribes? Irunkovel certainly represents the subtribe where very member was also known as Irunko. It is not possible to say anything about others. Can it be said that Nannan also represents the name of a line?[14]

The distribution pattern of the Velir settlements (mentioned in the texts) indicates two distinct grpoups. Group A represents the Velir of the peripheral areas. Such areas also held a series of entry-points leading to Tamilnadu. Chronologically, these entry-points may have housed the earliest intrusive Iron Age culture groups in this region. In fact the Velir of Kunrur (Coonoor-Nilgiri) are called `ancient Velir people'[15], probably because they had a relatively higher antiquity in areas of settlement than the others. The communities in these peripheral areas thrived within a broad-spectrum subsistence economy where hunting-gathering, pastoral nomadism and swidden cultivation existed side by side.

Group B represents the second group or the Velir of the lowland, primarily situated in the riverine plains and coastal areas. These areas mainly fall within zones categorized as nuclear areas and in all probability carry a post 8th/7th century B.C. chronology[16]. A striking feature about the distribution pattern of Group B is a clear coincidence with the spread of particular types of burials i.e. urns, cairn.stone circles.

The title 'Kilan' was interchangeable one between lineage chiefs and chiefs of Nadu regions.

There remains to be considered the suffix 1Kilan' which occurs in Maiyur Kilan' (Patikam 9th Ten - Patir.) above mentioned. This is recognized as a title of the velir. There are any number of poets and patrons with the suffix : Aricil Kilar (Kur. 193 ; Patir. 71-80; Puram. 146, 230, 281, 285, 300, 304 & 342), Alattur kilar (Kur. 112 & 350; Puram. 34, 36, 69, 225 & 324), Ayur Kilar (Puram. 322), Arkkatu Kilar (Agam.64), Itaikkunrur Kilar (Puram. 76, 77, 78 & 79), Ukaykkuti Kilar (Agam. 69), Kayattur Kilar (Kuram.354), Karuburm Kilar (Kur.170), Kattur Kilar (Agam.85), Kari Kilar (Puram. 6), Killimankalan Kilar (Kur 76, 110, 152 & 181), Kurunkoliyur Kilar (Puram.17, 20 & 22) Kunrur Kilar (Nar 332 & 338), Kutalur Kilar (Kur.166, 167 & 214; Puram. 299), Kovur Kilar (Kur.65; Nar. 154), Nocci Niyaman Kilar (Agam.52; Nar. 17, 208 & 209, P. 293), Perunkunrur Kilar (Agam.

8; Kur.338; Nar 5, 112, 119 & 347; Patir. 81-90 Puram. 147, 210, 211, 266 & 318), Potumpil Kilar (Nar.57), Matalur Kilar (Kur.150) Vatamotan Kilar (Agam. 317 ; P. 260). These are the poets with Kilar as their suffix.

Ampar Kilan (Aruvantai) (Puram. 385), Karumpanur Kilan (Puram.381 & 384), Konkanan Kilan (Puram.154, 155 & 156), Cirukuti Kilan (Puram. 173), Nalai Kilavan (Puram. 179), Malli Kilan (Puram.177), Maiyur Kilan (9th Ten - Patir. Patikam), Vallan Kilan Nallati (Agam.356), Vallar Kilan (Puram.181 & 265) - These are the patrons with Kilan as their suffix.

It may be suggested that nadu may have been derived from the root nad / nade to walk, go, pass, proceed, happen or nadu to walk, to enter or probably to plant (the foot) [17]. These root words are extremely important in the light of community movement - in the process of settling down consequently leading to thw evolution of the territory. In fact the very association of the adjectives perunkal and malai with the hill chieftain i.e. natan and also the association of proto Historic sites in peripheral hilly entry-points may give credence to the above assumption. The term nadu has an interesting parallalism in the Indo-Aryan jana + pada [18] foothold of the folk / clan. The very fact that there are nadu units mentioned in the Sangam texts in association with

the physiography, the resident community and economy i.e. the ecological context, gives further weight to our argument about the origins of nadu before the emergence of a full fledged agrarian economy in Tamilnadu. For instance, we come across regions such as Erumainadu i.e.land of buffaloes, which has a dominantly pastoral economy. We also hear of the physiographic representation in puli nadu (land of sands), kuttam nadu (land of lakes), karka nadu (land of rocks), malai nadu (hill country), punal nadu (land of waters) etc. There are instances when a particular region is identified after the resident community. for instance Venadu (land of Velir), Oyma nadu, Konkar nadu[19].

It appears that the nadu developed as a larger habitation zone when greater sedentarisation and an agrarian economy gradually development in the nuclear areas. the literary evidence may help to understand the structure of the nadu which evolved during the early historic period.

The geo-political area known as Parambunadu, which was the territory of vel Pari, was situated between Chola cpuntry and pandya country. Also many trade routes went through this region. The reference to irrigated agriculture and forest tracts. The reference to irrigated agriculture and forest products (i;e. those not produced by the ploughman vide Puram 109 3-8) indicates the co-existence of different production

techniques within the nadu. A second example may be quoted in relation to the formewr Travancore area. The Sangam texts mention a particular region named Nanjilnadu, which was under the control of a section of the Velir known as the Ay (Puram 137-140). Earier on, We had indicated the strong pastoral tradition associated with the Ay groups in a pre-existing situation.

Nanjulnadu,literally means'plough-land' and notices on the accumulation of surplas rice in the hands of Ay chieftains(Aham152.20), clearly shows that in additointo pastoral wealth, these 'territorial' possessed agricultural production and thus the existence of different production techniques. In another sense this co-existense also implies, the integration under the leadership of a chieftain, various groups specilizing in different production processes within a particular teritorial entity. the clan-based units of settlements. Such clan-units apperently continiued well into the pre Christian period, thopugh an equation between the settlement/habitation and its composite with a particular clan or class was becoming less conspicuous in the post 1st Century B.C. period.

This can also be called a transitory period where the pre-existing social relationships,economic system and political structure were new being uprooted at least in the nuclear areas for the establishment of new production relations.

Society in Chiefdom :

The structural formation of more complex and territorially larger political society, was in reality an internal and external integration of dispersed residential communities and ecological zones. In short, the new order sought to establish relatively stable foundations to the political structure that had begun to evolve beyond clan-based socio-political entities. This is reflected in the development of kudi and nadu as larger territiorial units.

As for the internal integration, this represents a 'unification' of several lineages under the hegemony of one group. In other words, an integration of the political elite located within micro regions to the most powerful or largest group occupying a broader geographical zone.

The internal integration leading to the subordination of sub lineage groups, located in micro ecological niches, by a more powerful lineage group is very appearent in the case of the Cera and the Cola. For instance Malaiyaman Tirumudikari (Puram 121-126) and Vel Nannan Udiyan werethe chiefs of lineages which were subjuated by Cholas and Cheras. The Pandyas may have completed their internal integration and probably evolved the concept of the single leader who was recognized as the carrier of the min symbol, around 3rd Century B.C. The fact that

the Pandyas possessed their local variety of Punch-marked coins and the location of the earliest group of Bhahmi inscription in the madurai Tirunelveli districts ma indicate a relatively early date for institutional formation in this region.

Even so, this did not imply that by the 3rd century B.C. politicla consolidation and territorial integration had been completed by the Cōla, Cēra and Pandya. It took at least another two centuries to eliminate opposition and stabilize hegemonic power.

Among the contending groups who challenged the expanding hegemony of the Cōla and Pandya, were the Velir chieftains who controlled certain territorial entities with clan-based societies.

On the one hand, the above material transformations unleashed intense competition for land, for its fertility and mineral resources rather than as pastures. On the other hand, the chieftainships of the velir, which were essentially clan-based territorial-units, were not competent to control the resourceful areas. Thus the historic task of evolving state systems capable of intergrating communities and resources under different production relations fell upon the Chola, Chera and Pandya.

The position of the Velir vis a vis the Cera-Cola-Pandya is reflected in terms attributed to these two groups giving an earlier antiquity to the Velir vis a vis the Cera-Cola-Pandya. Thus the former are called the 'ancient ones / families' (Aham 372 : 3-4; Puram 106; 289.5; Nar 280.8) and the latter, vampa i.e. upstarts/newcomers/strangers/aliens (for details vide Kailasapathy 1968 : 251.2).

In this context we may note that the Chera-Chola-Pandya are called the 'three crowned kings' i.e. Muventar. Ventar is a 'crowned king'. It is worth noting that political leadership and the authority over the community-territory-resources in clan-based societies was a power vested by tradition and not one 'sanctioned' by a superior authority. One may note that, with the exception of the Satiyaputa or the Adigaman, the three other groups identified as Ventar, are also mentioned in the Asokan edicts.

The mere title Ventar did not necessarily imply the establishment of an evolved state and a hierarchized political order. The 'sanction' which gave political status to the Muventar, was only a symbolic representation of power whereas actual political consolidation and real authority evolved only within the next two to three centuries.

Some Velir had control over pastoral wealth, access to areas of mineral resources, fertile agricultural tracts with high potential

and even coastal exchange centres. It was, therefore, imperative, from the point of view of the Ventar that they gain control over such lucrative economic resources, which would in turn deprive the Velir of their material base and consequently underwine their political base as well.

The process of subordinating the Velir (and the other chieftains) took three forms. Firstly the Muventar directly subjugated the Velir or acquired the territories of some of the Velir.By this process they had expanded their regions. We can sight the example reflecting such an instance is the concerted effort made by the Muventar to eliminate Vel Pari. It may be noted that Parambunadu was strategically located in proximity to all three territories of the Muventar, which controlling vital communication lines .

The second method of intergration adopted by the Muventar was the effort made to take brides from the Velir families. In certain instances the Ventar succeeded in obtaining brides from the Velir, e.g. Cola marriage alliances with the Velir of Virai, Uranati, Nangur and Alundur.

The third method was to integrate the Velir by recruiting them to serve under the Muventar. It is recorded that Alumbil Vel served under Ceran Senguttuvan (Silap xxv.i77). In another context, it is recorded that one Manaviral Vel held sway over Alumbil (Maduraik 344-45).

Pandya Nedunjeliyan invaded Kuttunadu and looted the port town of Muciri (Maduraik 105; Aham 47. 149). Apart from the western sea board, he controlled the rich pearl centre of Muttur (Puram 24.18-23) and controlled the Partavar chieftains (ibid 144). In addition he controlled Korkai yielding chank and pearls (Maduraik 135-8;)

The Cholas followed a similar tactical policy. Certain chieftains of the Oliya, and Poduvar herdsmen were subordinated by Karikala (Pattinap 274-282). They also used some of these subordinate chieftains to keep in line other independent groups. Matti, the Paratavar chieftain punished chief Elini on behalf of the Colas (Aham 211).

It is therefore clear that the post 3rd Century B.C. withnessed a period of fierce competition and confrontation. Fortified political capitals such as Uraiyur, Karur (Vanji) and Madurai. The lineage become an important legitimating factor. The lineage become an important legitimating factor. The Pukalur inscription 2nd century A.D.) records three generations of the Cera dynasty (Mahadevan 1966 : Nos. 56-57). This inscription as well as the Sangam texts montion the extistence of heir - apperant where they administered at Korkai and Kaverpattinam. With the performance of Vedic sacrifices e.g. Irasasuyam (Puram 16,125,367,377) they obtained a very effective means of political legitimation.

The Velir may have formed the next group in the political hieerarchy. They appear to have been socially at par with the Ventar though politically they were at a level below the latter. This structure not only helped the Ventar to absorb elite groups from newly subjugated regions and communities and as a convenient machanism of intergrating them to the Great Tradition, but also provided as avenue of upward mobility for newly emerging affluent groups associated with craft and commercial operations at urban centres and the agrarian elite in the rural areas.

The composers of this period adhered to concepts emphasising the equal status in birth for the hero and the heroine i.e. pirappu . Kailasapathy points out that"... it was the aristocrats and noblemen and their diverse actions that were considered fitting poetic treatment. A case in point is a rather common word kilavan or kilan,frequently denoting the male lover in love poems. It means 'owner, master, husband'. The feminine kilal or kilavi means 'proprietress, mistress, wife' Likewise, many other words used for the lovers definitely connote higher social rank: e.g. talaivan, kuricil, entai etc., mean 'chief, lord, noble,' The idea is clinched by Tol's statement that slaves, servants, errandmen etc., are not enttiled to be portrayed as heroes...." (1968 : II)[20].

A second important method of acquiring economic gains through political strength was the extraction of resources through chieftains who operated in such areas, e.g. Elini supplied elephants to the Cola. Similarly, Matti the chieftain of Kalar at the confluence of the Kaveri, probably had access to commercial resources. Matti was an ally of the Cola and probably paid tribute in the from of oceanic resources. It is quite likely that when Nedunjeliyan subjugated the southern Paratavar chieftains, he may have naturally gained access to certain martime resources which they controlled in that region.

This acquisition and the gradual instrusion into economic activity by the Muventar coincided with a developing commercial operation during the Early Historic period. There is strong evidence to show that the Muventar actively participated in resource accumulation geared to contro trade and commerce.

In the valleys of Vaigai and Tamrapanni, south Indian issue of Punch-marked coins occur with the symbol of the issuing authority i.e. the min symbol of the Pandyas (Loventhal 1888 : 4-6). The establishment of Korkai s the coastal captial of the Pandya housing their viceroy and where they extracted maritime resources using slave labour (Madurasik 138; Sirupan 62; Silap xx.30, 66; xxvii.127; Schoff 1912/ 1974 : 46, 237) is another instance. The need for Nedunjeliyah to

copntrol the eastern coastal ports, the inward movement of resources from various regions bringing gems, gold, sandal-wood, pearls, coral, etc., which made Kaveripattinam a rich entrepot where exports were sealed with the Cola tiger emblem (Pattinap 90-150), the fabulously rich port of Muciri that was controlled by the Cera where they concentrated import and export commodities such as pepper, gold, gems, ivory, fish, paddy, etc. (Schoff op.cit. 56; Puram 343. 1-10) points to a strong commercial tradition. Likewise, the clearance of forests and the creation of agrarian tracts by Karikala (Pattinap 283), taken along with the commercial factor shows that, by the 1st Century B.C. and after, the Muventar maintained control over the operational mechanism of labour, commerce, trade and agricultural production. Considering this, it is evident that the traditional as well as new elite groups had to operate within the spheres of control laid down by thye Muventar.

In all probability, the earliest from of Tamil rule, of which we are offorded some glimpses here and there in this the literature, was a sort of communal republic wherein each adult male member of the community had a voice in the direction of public affair. Although we discover the Pandiya and the Chera rulers as full-fledged kings, the orgin of the Chola line of sovereigns throws considerable light on the primitive communal republic. The people seem to have existed as village

communites under the direction of Kilars of the village elders. The elderst member of the family had the direction of affairs in his hands, assisted of couses by the village assembly periodically convoked. The term 'Kilamai' means right of possessioon. This abstract concept is undoubtedly a later growth and should have denoted at first the right of the village elders of Kilavar. In course of time, the village communities grew in number and size and then they held together as a union or confederacy of a number of such communities presided over by a Vel, Ko or king. This Vel or Ko had a number of Kilars under him each representing a village. Though the Kilars and Vels were the executive heads and prididents of their respective village assemblies and confederacies and confederacies , theirr powers were probably very limited in peace time by the authority of the general assemblies of the villages. This type of political organisation was wholly the results of the peaceful and settled condition of an agricultural community, organised for peaceful pursuits. It is to these early types of communal republics that the Ashoka's edist refers.

No name of an individual king is there in mentioned in the south, as in the case of the western sovereigns. They are called the Cholas, the Palayas the Keralaputras and the Satiysputrace the communal names beyond doubt. It would be highly unhistorical to read the type of princely autocracies evolved thater on in the Tamil land into the early conditions

of the third century B.C. All that is intended to be conveyed here is that the Tamil autoeracies depicted in these works were certainly preceded by another type of political organisation which was peculiarly republican and Dravidian in its character. By the time of the generations comprised in the Tables the old organisation had well-nigh lost its original vigour and a process of dissolution had set in. For territorial expansion the peaceful agricultural communities seem to have placed themselves under leaders of military genius, who later on turned into autocrats, pure and simple, and robbed the communities of their original rights and powers. In short, independance was the heavy price the communities had to pay, for the doubtful advantage of new territorial acquisitions. This is the picture we get from the earliest references bearing on the Chola rule.

Legitimization:

Besides being pace makers of royal authority and agents of its legitimization, religious establishments posed little threat of armed rebellion to the king. On the contrary, the sanctity of these religious centres had to be respected by the king's opponents and this may have helped in the creation of buffer zones in areas of strategic importance. There has been some debate on the question of the loss of revenue to the king. An important consideration is whether the royal donor could himself have exercised all those powers which he transferred to the monks.

A spatial study of royal inscriptions, granting land shows that they are concentrated at Madurai and Karur. The importance of both these centres in controlling trade routes from the interior to the coast need not be dealt with here as it has been discussed in detail at several places in this study. What should be pointed out is that karur may have formed a part of the disputed territory between the Cheras and the Cholas.

Kosambli was possibly the first scholar to recognize that the influence of monastries extended far beyond religious matters. Monasteries were important purchasers of cloth and other commodities for the monks and retainers and of costly material for ritual and ceremony. They possibly also supplied(for profit) essential provisions and loaned(at interest) much needed capital to trade caravans. Besides the monasteries were untaxed and their possesions not in danger of arbitrary confiscation by kings or officials as might be the lay merchant's hoard. A secondary economic function, the charitable use of monastic grain for the relief of famine, scarcity or individual distress among laymen gained them special reverence from the savage tribes and the earliest villagers. The sanctuary that would be given even to robbers who wished to renounce their evil ways rendered these foundations the more immune to attack by brigands.

That takes us to 350 A.D., exactly the period when the Pallava power got itself lodged in Kancipuram. All the Tamil kings suddenly go under an eclipse and the poets of the period had to sing of other themes than their patrons' glories, presumably for want of the old type of patrons. The kings, no doubt, must have been there holding court; but one can justly infer from the lack of literary record that they should have been shorn of much of the power and prestige enjoyed by their early ancestors. Although much is not known about the Kalabhra interregnum, the dark period of Tamil history, it is highly probable that it marked the first incursion of a border race from the north into the Tamil states. The hypothesis that this movement was only a fore-runner of the general Pallava invasion which later on swept through the land can scarcely be considered an extravagant one. Whatever be the subsequent history of the Tamil country, the Tables have to close with Ko-Cenkannan. And between him and Tirugnanasambanda, four centuries intervence, centuries whose gloom is lighted up neither by the early poems nor by later epigraphs. The late Prof.P.Sundaram Pillai in his Age of Trugnanasambanda expressed the hope that this period could be approched with profit from the other side-the Ko-Cenkannan period. The approach does not, however, seem anywise promising; still future research, let us hope, will let in some gleams into this dark and irretrievably blank period.

1. Marshall D. Sahalin - `The Segmentary Lineage - An Organisation of predateary. Vol 63 p. 322.

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8. Mu.Ragava Iyengar, `Velir Varalaru', p. 8

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10. Duari Rangasamy `Sri Names in Sangam Age Literary and Tribal', p. 143

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13. Dorai Rangasamy Opcit p. 117

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15.Kurunthogai Verse 164

16.Sudharshan Seneviratne Op.cit

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URBANISATION

URBANISATION

The impact of the western urbian studies has also led to a sharp distinction being made in the studies of western and Asian cities. The western cities construed as symbols of economic vitality and political autonomy. But the contrary the Asian cities or urban forms are predominantly political and cultural rather than economic phenomena. Recent reserch has pointed out that this contrast is as hallowed as the contrast between town and country. The second major question often raised in urban studies is that of the validity of the conceptual separation between the town and the country, the rural and the urban. This duality is now being abandoned except as a `social division of labour in the largest whole[1]. ' The inseparability of the town from the largest envrinment is stressed and towns are regarded as sites in which the history of larger social systems-states, societies, modes of production, whole economies-is partially but crucialy worked out'[2]

Similarly, the validity of treating the town as a distinctive social structure, i.e. a special entity having a structural autonomy is now largely rejected and instead, urban analysis `through a broader societal analysis' has gained general acceptance. Hence, in the more recent works on urban history and the city, the central concern has

been urbanization, i.e. the processes of urban growth leading to the rise of the city. In other words, urbanism is perceived as the product of social charge.

Typology has been an important. The best known among typologies is the classic distinction made by G.Sjoberg between the industrial and pre-industrial cities, which would seem to coincide with the distinction sociologists make between cities in traditional and modern societies[3]. Sjoberg's is a useful distinction but is only a `constructed type', no homogeneity or uniformity in structural pattern being implied for the pre-industrial city. There is no `one basic language' as Fernand Braudel pointed out, `for all cities of the world within their very depths'[4].

The orthogenetic and heterogenetic cities, a model introduced by Robert redfield and Milton Singer, has influenced studies of traditional and olonial/modern cities as seen in Susan Lewandowsky's study of Madurai and Madras[5]. Colonialism has often provided a visible marker for differentiating the cities in Asia as traditional (orthogenetic) and colonial (heterogenetic). With colonialism, the western kind of city is believed to have been imported. This would seem to be an incredibly simple explanation of the emergence of new types of cities, where the physical structure

and composition of the city change due to the heterogencity of ethnic and cultural groups. That no uniformity can be recognized in the colonial towns in South India, which stress the importance of understanding pre-existing forms. Some of these pre-existing structures are the main concern of the present volume.

Further more, the orthologenetic and heterogenetic cities are not exclusive to traditional and modern cities respectively, as has been shown by the ne-weberian approach of centrality and those of concentration operating in different periods and different social historical contexts. A similar distinction is made by Howard spodek in what he calls a nodel vision or perspective for heterogenetic centres and a palimpsest, i.e stability within indigenous culture for orthogenetic centres of urban activity. Spodek tries to evolve this distinction on the basis of a study made by several scholars of cities in south Asia ranging from early historical Taxila to modern/colonial Madras.

Typologies or distinctions in city-types are also made within specific historical contexts and are often attributed to factors to which a certain primacy is given as causative or innovative, leading to types such as political/adiministrative centres, military centres trade or commercial centres, religious centres and so on.

While this is common in the conventional economic histories, it persists in more recent works on urbanism, which lay stress on the causative role of certain factor. However , in the long period of social and economic change generating urban forms, an elaborate complex of factors is mingled in a processual change. early cities. Stable systems of trade, artisans and merchants as permanent community fixtures, specialization of crafts, transport innovations, all of which are often cited as urban forms. Thus, causative factors may occur in different orders of primacy in creating distinctive types. While economic factors are basic to urban growth, often what is required is a focal point was often provided by an idelogy, usually religious. As Paul Wheatley points out:

"It is doubtful if any single autonomous causative factor will ever be identified in the nexus of social, economic and political transformations which resulted in the emergence of urban forms, but one activity does seem in a sence to command a sort of priority. Whatever structural changes in social organization were induced by commerce, warefare,or techonology, they needed to be validated by some instrument of authority if they were to achive institutional permanence[6]."

Given the diversity of the phenomena called `urban' Wheatley's characterization of the cncept of urbanism `as compounded of a series of sets of ideal type social, political, economic and other institutions which have combined in different ways in different cultures and at different times', is significant. In other words, urban studies should be situated in specific social-historical contexts in terms of their spatial and temporal spread.

Urban sociologists would treat towns as social relization of power, stressing the continuity of social stratification between town and country[7]. Power and the pattern of domination have been the main concerns in the discussion of towns by weber, Braudel and even Sjoberg, who see the town internally and externally as an institutional expression of power[8]. Following Weber, Philip Abrams uses what he calls the complex of domination for a better understanding of the nature and function of towns in a larger social context, a struggle to constitue and elaborate power[9].

In the stduy of urban processes, another useful distinction is that of primary and secondary urbanization. In primary urbanization the rise of cities is solely the result of internal developments, although not in complete isolation, for external influence in varying degrees could induce such development as in

Shang China and to some extent in Mesopotamia and Centarl America[10]. Wheatey would see the character of Chinese cities as a distinct independent development, a process generation and not imposition of urban forms.

Secondary urbanization is the direct outgrowth of the expansion of empire, wherein forts and regional administrative centres, established for political and economic control, could act as centres of diffusion of metropolitan culture, i.e. technology and other knowledge. The workings of the sophisticated administrative and technological structure of the conquering society provide the skills to locals , helping them to altimately to assert their independence[11]. This apperas to be directly relevant to colonial history which provides examples of secondary urbanism. Apart from the relevance of secondary urbansization in a colonial context, it would also be interesting and pertient to see whether the expansion of early empires like that of the Mauryas induced secondary urbanism in regions like the Deccan and Andhra[12].

It would also appear then that the primary and secondary urbanization are representative of the same processes as those of the formation of pristine and secondary states of Morton Fried.

In secondary urbanization there is either a processof generation inspried by the extension of empire, or direct imposition of urban forms, i.e. organizational patterns develeped by the conquering state. Wheatley uses this distinction to explain the establishment of early Chinese style settlements in a colonial context in Sino-Viet territories as urban imposition[13].

The city's role as a locus for change, the city as the focus of power anddominance, and the city as an organizing principle or creator of `effective space', have been the most influential paradigms in the concept of the ceremonial centre.

"It is in working out the concept of the ceremonial centre that a religious ideology and the institutions that were evolved to create `effective space' and to constitute and elaborate power, become the main issues in the study of `pre-industrial or traditional cities. It is by ni means implied here that religion was a primary causative factor." Rather it was one which, as in the Mesopotamian case, `permeated all activities, all institutional change and afforded a consensual fous for social life which mainfested itself in all cult centres'[14]. Religion became the focal point for collection and redistribution of resources and religious centres had theri granaries and records of accounts[15].

The ceremonial complex receives central importance in the emergence of urban forms and in the shaping of pre-modern (pre-industrial) cities in studies on urban historical geography. The approch to urban historical geography is through the city as artefact and spatial patterning as the central focus in urban history. However, the city and its patterning can provide the evidence for interpreting attitudes and ideology. Here, religion is not given primacy as the single cause, but as providing a focus, a validating instrument for urban institutions.

Three Major period of urbanization have been indentified in Indian context[16]. The first is represented by the proto-historic cities of the Harappan/Indus valley culture assignable to a long period from the middle of the thrid millennium to the middle of the second millennium BC. The urban character of this phase is recognizable in a hierarchy of settlement sities, in the planned cities, in the urban infrastructure provided at Mohenjodaro, their design, monumental architecture and orientation, apart from other significant architecture and orientation, apart from other significant archaeological evidence. This culture was, however, confined to the Indus region. The major part of the subcontinent remained unaffected by this early urbanism.

The second period of urbanism, was emerged in the Ganga valley, was spread over a long period, from the middle of the first millennium BC to the third century AD, and is often attributed to the maturity of the iron age and the expansion of trade within the Ganga valley, and from the Ganga valley to other parts of India, covering almost the whole of the subcontinent. Its impact in peninusular India may be seen as generating urban froms due to the spread of trade and commercial activities from the Ganga valley. More significant in peninsular India was the impact of maritime trade. In the Deccan and Andhra regions this period is understood to be one of secondary urban generation and secondary state formation, which become two inter-related processes induced by the expansion of the Mauryan empire[17]. While this general assumption appears to be valid in terms of political processes in the Decan and Andhra in the post-Mauryan times, the generation and nature of secondary urbanism in these regions is yet to be substantiated on the basis of detailed studies of towns from the Mauryan to the Iksvaku periods (third century B.C. to third century AD), both in the Ganga valley and peninsular India. Regional variations in this phase of urbanism are crucial to an understanding of the degree and intensity of secondary urban forms in Tamilnadu, where the impact of Indo-Roman trade was greater and the influence of Mauryan polity was minimal[18].

For peninsular India, this phase represents the first urbanization. Only a beginning has been made in this direction, i.e in the understanding of urban processes in regional contexts. Much of the Andhra and Deccan areas, studded with various types of settlement patterns. For Tamilakam, in the early historical period, the stude of settlement patterns, ecology and forms of production has demonstrated the need for such an approach and provided useful insights into the nature of economy and urban forms.

Trade and Urbanisation :

It has been said earlier that the maritime trade of this period had restricted impact in certain zones leading to urbanism and the emergence of tradig stations/ports on the coast, which were centres of exchange in long-distance trade, and of concumption points in the inland centres. It is only at such centres that regular buying and selling of goods took place. There were angadis (markets) and avanams (stores) in places like puhar Madurai and Vanchi (Karur) which became major commerial centres due to the expansion of trade on the eastern coast of Tamilakam later works of the Pattupattu collection and the epics Silappadikaram and Manimakalai give more detailed descriptions of these centres and their commercial activities.

Two kinds of markets-the nalangadi or the day market, and the allangadi[19] or the evening market - are known, and in Puhar these markets were active in the area between the Maruvurpakkam (coastal area) and the Pattinappakkam (residential area). The volume of trade is indicated by the references to the valuable merchandise stored in million bundles[20] large quantty, and the items were often rare and prestigious goods sought by the urban elite and rulers[21]. Similar descriptions of the market place at Madurai are also found in the Maduraikkanchi[22].

The picture of the market place in Madurai is equally graphic in Maduraikkanci and Netunalvatai. The texts say that it was a big market, a converging point for traders, a centre of crafts like gold jewels, gold statues ivory inlay work and stucco images. The gold merchants were specialists who could testify to the fineness of gold and goldsmiths, well skilled in drawing thin wires from molten gold[23]. There were traders in pearls and precious gems who had their shops in the markets. Chank cutting and bangle making were also important. That it was the source of the best cotton is mentioned in the Arthasastra although wherther this text meant the old Madurai on the coast or the one in the interior is not certain.

Towns in Greek Works

We have any references from ancient greek geographers above trade centres which had developed into urban centres in course of time. The ports and towns that emerged as a result of this expanding commerce, may be classified under different heads as the Graeco Roman accounts seem to have done. In the periplus Maris Erythrae (of the Erythraen Sea) of the first century AD, centres like Naura (Cannanore? Mangalore?) Tyndis (Tondi, on the west coast) Nelcynda (Kottayam) Bacare (Porakad) all on the west coast, Camara (Puhar), Poduce (Arikamedu) and Sopatma (Marakkanam) all on the east coast, have been categorised as `Marts' or market towns[24] Subsequently, Ptolemy in his Geographia of the second century AD introduced a hierachy by elevating six of these centres to the status of 'emporis'- Muziris(Muciri west coast)[25], Kolkhoi (Korkai), Khaberis(Puhar) Sabouras (Cuddalore) Poduke(Arikamedu) and Melange (Mahabalipuram) all on the east coast. Elangon(?) Manapha is it Mailarpha Mayilappur in Madras and Salur(Saliyur near Alagankulam) were categorised as marts[26]. The inland centres are generally referred to as cities/towns).

Complex Urban Society :

The pattinapalai would seem to support the description of Puhar's status as an emporium, which had its own quay, harbour, warehouses and accomodation for foreign merchants. With the Colas officially approving and promoting it as an anchoring point, (port) Puhar developed as a place ' where business between people of different nationality may be transacted lawfully, where lawful dues and taxes may be imposed where possibly foreigners reside.

The larger transactions by specialized merchants dealing in high value goods for the inter-regional and maritime trade. These terms are Vilainar(seller), pakarnar(hawker) as also the vambalar(intinerant newcomer? wayfarer?) the vanikar(trader) paratavar (fisherman turned traders) and even the umanar(salt merchants)[27].The seller and hawkers were also present in cities like Madurai where they sold the produce of the hills, the plains and sea and even items like gems, pearls and gold[28]. The diversification of commerce is reflected in the nature of specialist traders in the markets of Puhar and Madurai, some of whom dealt in high value commodities apart from daily consumption goods[29]. Thus, in the markets of Puhar and Madurai, there were puvinar (flower sellers) kodaiyar (garland sellers) cunnattar (aromatic powder sellers) nidu

kadi ilaiyinar (betel leaf/arecanut sellers) kodu-cudu-nurruinar (shell lime shell bangle) kadainar (shop keepers) manikkuyinar (gem or jewel makers) Kalingam pakarnar (Kalingam cloth sellers) vambuniraimudinar (fine garment sellers) Kal-nodai-attiyar (toddy(?) or wine(?) sellers) the kanca karar (bronze sellers) cempu ceyikunar (cooper article sellers) and skilled worked of all sorts[30]. In most cases, the manufacturers or producers of such items were also the sellers.

The early Tamil Brahmi inscriptions, recording these donations, indeed mark the trade routes, and in many significant ways confirm the literary references to specialist traders, e.g.uppu vanikan (salt merchant) painta vanikan (toddy seller) kolu vanikan (iron merchant) Panita vanikan (toddy seller) kolu vanikan (iron monger) aruvai vanikan (cloth merchant) pon-vanikan (gold merchant) maniy vannakkan (lapidarist) as donors, apart from the Cera and Pandya ruling families[31]. Interestingly, some of the poets of the Sangam texts belonged to the merchant community and often carried as a prefix to their names, the names of some major commercial centres to which they belonged and the nature of their trade. Some instances are Madurai Anuvai Vanikan Ilavettanar (Ilavettanar the cloth merchant of Madurai) Madurai Kula Vanikan Sittalai Sattanar (grain

merchant) Madurai Olaikkadaiyattar Nalvellaiyar (palm leaf/ jewellery merchant) Uraiyur Ilavettanar, the cloth merchant of Madurai) Madurai Uraiyur Elampon vanikanar (gold merchant of Uraiyur) Kaverippumpattinattu Povanikanar Makanar Nappudanar (Nappudanar, son of a gold merchant of Kaverippumpattinam[32].

In the later poems of the Sangam collection they are depicted as living in fine mansions and as sporting silk raimentrs and gold jewellery. The later epics Silappadikaram and Manimekalai refer to their affluent life styles.

Coinage :

A pointer to urbanisation the ciruculation of Roman coins and their use as money in South India is volumnus me has suggested that their occurrence in a stratified context, however that their occurrence in a stratified context, however negligible, would indicate a limited circulation, possibly along the routes of trade and rivers of transport. Use of Roman coins as jewellery, mainly cofined to the Tamil region, would also suggest a lesser role for Roman coins as exchange media, except in large transactions[33].

A coinciding of various factors may have led to the need to hoard, not necessarily as bullion, for gold was available in India,

the Kolar gold fields showing evidence of working from Mauryan times to the early centuries AD. Considering the large quantities of merchandise that were traded in the occurrence of such large number of Roman coin finds need not be surprising as payment for this trade would have required a large monetary outlay Roman coins were also constrade as gift in the gift exchange system followed by the Tamil chiefs and ruling families as symbols of status. The Tamil classics have references to gifts of gold to poets (pulavar) who were patronized by the rulers. This was one form of redistribution, in which prestige items such as horses, elephants and gold figured.

Coins, without portrits, but with symbols like the bow and arrow, the Cera emblem, a mountain, double fish and a tiger and legends reading Kollippurai (meaning Poraiyar, the rulars of the Kolli hills, have also been found in Karur[34]. This would further support the presence of a mint in this centre. Different lineages of the Ceraswith suffixes like the Kotai (Mukkotai) Porai are known from the Sangam texts and the epigraphic and coin finds confirm that they ruled in and around Karur[35].

Religious Institution :

Institutional forces like the Buddhist monastery, with their impressive monuments and guild organizations as foci of urban

development are not attested to in the archaeological and epigraphic records of early Tamilakam, which is marking a major point of difference in the nature and forms of urbanism. The only notable Buddhist structures (or brick) have been unearthed in the port town of Kaverippumpattinam, and these are dated to the fourth and fifth centuries AD while the earlier period has no significant architectural remains[36].

The references to Buddhism in the earlier poems of the Sangam anthologies indicate that Buddhism and Jainsm were among the many religious faiths which had a following in the politico-commercial centres like Puhar, Vanci and Madurai. It is only in the post-Sangam epics Silappadikaram and Manimekalai that Buddhism Ajivakism and Jainism appear as influential ideologies amoung the merchant community and craftsmen[37]. Royal partronage to these three Sramanic religions is recorded in the brief donative Tamil Brahmi inscriptions occurring on the trade route linklng the Tamil region with southern Karnataka and with the west coast. These donations hardly reached the level of the big projects of the Deccan and the Andhra regions. They were vassa or rainly retreats for the wandering mendicants in the form of natural caverns on hills, made suitable for the monks through provision for stone beds and drip

ledges to carry rain water away from the caverns. These caverns with stone beds and Tamil Brahmi inscriptions occur in the hills around the Pandya Capital Madurai, around the Cēra Capital Karur and near the Cōla Capital, but more significantly, they are found on the trade routes, with a concentration in transit zones like the Pudukkottai district and Erode (Periyar) district[38]. Hence apart from royal donors of the Pandya and Cēra families, the Cōlas do not figure in any of the donative records. Again, the individual donors belong to the trading and artisan communities. Guild organization like nigama, is known from these records very few references are there in the Tamil Brahmi inscription to householders comparable to the northern gahapatis as donors to any of the Buddhist and Jain teachers.

The spread of Buddhism and Jainism coincided with the increase in trade and commercial activity and introduces an element of heterogeneity in the urban centres. Buddhism registers a significant presence in the coastal towns, while Jainsm is confined to the inland centres, both in the political and commercial centres and on trade routes. The heterogenity of the urban population in the inland and coastal centres shows, however, that people of different ethnic origins, different occupational background and belonging to

various religions aggregated in towns, where brahmanical and folk cults equally were represented. There is no evidence of a single Dominet Region in any of them.

The Tamil Brahmi inscriptions from Pukalur and Arachchacalur, not far from karur on the Kongu highway, recording gift to the Buddhist and / or Jaina ascetics, by the Cera ruling family and by merchants, craftsmen etc., refer to three generations of Cera rulers135 and point to the influence of the Sramanic religions over the trading community and the rulers. Kodumanal, the Kodumanam of Pattirruppattu, situated nearby, with evidence of a large gen and jewel manufacturing centre, adds to Karur's importance as a commercial centre[39].

Monument :

A pointer to urbanisation the evidence of the epics, which are chronologically later than the Sangam anthologies, would again point to the development of Karur into a large urban complex and the inclusion in it of Buddhist and Jain establishements[40]. The Manimekalai refers to a caitya in Vanci, belived to have been built by a predecessor of Kovalan (the hero of the Silappadikaram) who became a monk after giving away his welath, evidently to the

contemporary Cera ruler and the caitya was built in brilliant white stucco with its turrest reaching the sky. At Vanci an Indra vihara is also said to have been built resembling the one at Puhar,[41]. The reference to Indra viharas suggests that Buddhist establishments came up on the outskirts of big urban centres. In some cases, as in Vanci and Puhar, they may have been erected by merchants or trading groups, while later tradition provided them with great antiquity. At the time of a famine in Kanchipuram, we are told, the Buddhist mendicants abandoned the city and settled down in the vihra at Vanci[42].

The Maduraikkanchi, the longest poem in the Pattuppattu collection, and datable to the second century AD, gives a graphic description, of Madurai as a large and beautiful city, with a palace, a number of temples, two large markets (bazaars) and well laid out streets with lofty mansions[43]. It had protective ramparts (walls) with huge gates and trowers, surrounded by a deep moat, with the Vaigai river skirting the city walls forming a natural defence on one side. People of different social strata and speaking different lanuages lived in different localities, professionals and craftsmen crowding the streets with their wares. Peddlars and petty traders also plied a brisk trade in the brahmanic (Sramanic) religious houses or places of



THREE IN-ONE RING.



BRAHMI LETTERS IN SILVER RING.

worship also existed. The Netunalvatai repeats some of these descriptions and adds that the apartments of the palace were lit by yavana lamps and drunken mileccas (yavanas) roamed about the streets with their dresses hanging loose on the back and front.

Urban Art

Karur's importance as a political and commercial centre is also attested by other archaeological finds in and around the town. Apart from the prized Roman aureus of Claudius (AD 41,54) from Karur, a large number of Roman coins, especially the hoard from nearby Vellalur, and the recent discovery of Cera coins in the Amaravati river bed provide supportive evidence. The loiterary references to Karur as a centre of jewel making are corroborated by the finds of some of the oldest finger rings with intaglio, one being a mithuna of the Amaravati style, others with Graeco Roamn motifs like cupid, a warrior fighure on a prancing lion with Hellenisatic attire, with Buddhist symbols like the triratna/nandipada and Brahmi legends with personalk names, all assignable to the period between second century BC and first century AD[44]. It is also significant that the vellalur hoard of Roman coins contained jewels with Roman intaglios. A gold merchant from Karur figutres as the donor of a stone bed to a jaina ascetic at Pukalur not for from Karur.

Education:

Education is one of the land marks in Urbanisation. Literary evidence available for the educatiional institutions. Archaeological evidences are corroverated which are unearthed recently. Inscribed potteries were unearthed enormously. These indicate the education prevailed in urban centres in Tamilnadu. At Karur inscribed potteries are found. These potteries are dated to first two centuries of Christian era. All over Tamilnadu more than thundred inscribed potsherds were found[45]. These inscriptions are not damaged. Inscriptions from Kodumanal have some Ashokan Bhami scripts like'sa' and 'Dha'[46]. This reveals the fact that Kodumanal and other urban centres had contact with North India. This also reveals the fact, the people who knew the North Indian script, had lived there.

More than Thunderd poets have hailed from Urban centres during Sangam period. Most of them were traders. Kabilar says that Kodumanam was also famous for the group of learned men[47]. These evidences show the Tamil urban centres were also the centres of learning in Sangam period. This was maintained through-out the period under study. According to the traditions there were three Sangams (Academy of poets in Early Historical period). There, Sanskirt, Prakit, Paisasi and Tamil languages were studied.

Philosophical systems:

Society during the period under study reflects to an incipient urbanisation. the complexity of the new society had needed the codification of laws of the various social groups. The people seem to have worshipped various elements of Nature such as sun,moon,sea,river,tank,mountain,tree,plants etc., Besides, sacrifice was also offered to the different Gods and Goddesses. The unearthed finds mostly the terracotta objects of religious significance from the various excavations in Kongu[48]. They confirm the evidence of the Sangam literature on the then existing beliefs of the people in the field of religion and philosophy and the different forms of worships connected with them. Some form of worship had prevailed there. Tribal cult like cattle cult also prevailed, relics of this named as ash mound. In modern days this is called as fire festival. The find of terracotta mother Goddess at Tirukkampuliyur dated 4th or 5th Century A.D. tells the worship of mother Goddess[49].

Here we propose to deal with the matter contained in chapters xxvii,xxix and xxx of Manimekhalai[50]. These refer respectively to the heretical systems of thought, Buddhist logic and Buddhist teaching as such. Chapter xxvii considers ten systems which ultimately resolved into five different religious systems

according to the work itself. The ten referred to are (1) what is generally described as Pramana Vada of the Viaidika systems, (2) Saiva Vada, (3)Brahma Vada, (4) Narayaniya or Vaishnava Vada, (5) Veda Vada. All these together constituted what Manimekhalai assumed as the heretical systems based on the Veda. Collectively they may go by one name Vaidika Vada, or the teaching which accepted the Veda. Then follows the system of the Ajivaka as taught by Markali, Markali Gosala of the Jaina and Buddhist traditions, and the Niganta or Nirgrantha, the chief teacher `Arhat worshipped of all the Indras'. The first of these systems in what is generally understood to be distinct from Jainism throughout its history more or less. But in South India, as in the Manimekhalai itself, the two systems are regarded as branches of a common system which is spoken of as that of the Samanas or Amana the Sanskrit Sramana, which had a wider general significance than the Tamil equivalent. The authoritative text-book of the Ajivakas is stated in this work, to be Navakadir, a work the name of which has not come to our notice elsewhere in these discussions.. The confusion between Jainism and that of the Ajivakas has been as old as the Divyavadana ascribable to the age of Asoka in the thrid century B.C. The Ajivakas are said to have flourished in a place called Samadanda in the work Nilakesi as yet unpublished. The Manimekkalai seems to regard thses two as

one system that of the Samanas or Jains. A later Tamil work, Nilakesi and the Saiva canonical work Sivagnanasiddhi state distinctly that the two sstems were braches of one. In other places and other conditions the Ajivakas were confounded with Buddhists, as in the Kannada country about the time contemporary with Sivagananasiddhi.

Then follw the three systems Sankhya treated with some elaboration, Vaiseshika, the Substance of which is Sankhya but equally clearly and lastly the Bhutavada, the atheistic system, treated as almost the same as the Lokayata of other works. After having heard all that the teachers of these respective systems have had to say in Vanji, Manimekalai ridicules the last one, and still in disguise, satisfied herself that she had acquired a competent knowledge of the 'Five Systems' notwithstanding the fact that she encountered of the ten teachers and obtained knowledge of their systems. Philasophical disscourses were intermingled with day to day life in all urban centres throughout Tamilnadu.

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CONCLUSION

CONCLUSION

The geographical position and historical factors were conducive for development of urban. In early historical period just like Tamilnadu, western Deccan had witnessed well developed urban centres. In these two regions forign trade was major factor in economic activities. Foreigners had purchased minerals and perfumes which were sifted in these areas.

In Tamilnadu neolithic sites have located at outcrops of Western and eastern ghats and river valley. These patterns of location were on account of pastoralism which predominated. In succeeding period megalithic culture pre dominated. This culture had bridged pre-historic and early historical periods in Tamilnadu. Most of the megalithic excavations yielded urban centres and habitation sites also. All these sites have been located at highways and river banks. According to archacological finds trade activites are major occupations in all these centres. Cattle breeding and shiftig cultivations were preceded trade. Hence the life was semi nomadic one . The pattern of magalithic sites also reveal the fact that people were on moving for pasture lands and shifting cultivation.

In early ~~histurical~~ historical period Tamilnadu had witnessed trade boom. Development of trade was the root cause of highways had

passed through Tamilnadu. This highways system must have its root in pastoral life. The settlements on these highways had necessiarly trade centres. Some of these settlements have coin finds and foreign artifacts. These reveal the facts that these highway and settlements had thrived on trade, particularly foreign trade. All the settlement and trade centre had been located in areas which were fanous for mineral wealth.

Mineral wealth find market in foreign countries they must have been exported from ports at west coast. Some of the settlements had been located at strategic position. We can cite Karur, Vellalur Anaimali and Palani. Hence they served as military contonments at times. Of all the above mentioned settlement Karur had enjoyed its strategic position. It had been located on the junctions of the major highways that connected all the important trade centre in penninsular India. Hence it was bone of contentions among Tamil trinity.

Foreign trade had formed the major parts of trade in Tamil nadu . Many forest products, mineral wealth, spices etc were the commodities. Of these commodities foeigners had given out coins in gold, silver and base metals Kongu had yielded 80% of Roman coin finds all over India.

Geographical factors may have influenced the economy in another way as well. As discussed in Chapter I the rugged terrain coupled with uncertain rainfall has made the western Tamilnadu an area of overall low agricultural productivity. Thus dependence on trade may have been necessary to supplement the yield from agriculture. Alternatively subsistence agriculture had to be supported by `cash crops' has suggeated that the real cause of the development of the Konkun coast was the sitting of mineral wealth.

A perusal of the Periplus (sec.49) shows that external demand was primarily for raw materials such as the different varieties of woods, e.g. ebony, teak, backwood, sandalwood and bamboo; aromatics such as bdellium, spikenard, coatus, lycium and saffron; spices like long-pepper, malabathrum and cinnabar;dyes such as indigo and lac; and semi-precious stones like agate, red jasper, carnelian and onyx. Cloth was perhaps the only item which required manufacture. As discussed in Chapter 4, the majority of these products were locally aviailable and did not involve either long- distance transportation or elaborate and complex processes of manufacture. What is more important is that the Arthasastra shows an acquaintance with and use of most of these commodities. It thus corroborates the evidence from the Periplus. The resulting prosperity led to a proliferation of crafts and an improved standard

of living as is evident from archaeological excavations at Satavahana sites.

Commercial transactions were based on a monetary system for large hoards of foreign coins have been found extensively in the Kongu Country, Roman gold and silver coins being presumably used as high-value currency better suited to the needs of the luxury trade. We have seen that the Tamilnadu trade was in both essential as well as luxury goods. The situation may have been different in the eastern Deccan where foreign traders may have been able to introduce Roman currency in circulation.

The development of a state from a tribal system of organization may at times appear to be a continuous process though the change entails a basic alteration in the manner in which the authority of the leadership is enforced and upheld. We have used the term `tribal system' to refer to a spectrum ranging from primitive segmentary lineage to the more advanced chiefdoms. What these have in common is the generalized nature of economic and social functions. In a lineage system authority cannot be enforced but is depentdent on the goodwill of members of the tribe and on traditional ties. In the absence of coercive powers traditional bonds

can only be established and maintained by gift-giving and the redistributive mechanism.

It has been suggested that a similar situation prevailded in the Tamil Country prior to the Mauryan penetration and in Chapter V we have discussed in some detail archaeological and literary references indicating the existence of lineages in the peninsula. It is possible that the Tamil trinity may have been its dominating lineage who on attaining power aspired to religious legitimation. Similarly the recording of donations by different occupational groups at the cave sites may be seen as a means of stating their economic power which in turn would determine their position in the new social hierarchy. This process of social transformation is attested in several periods of Indian history and as late as the eighteenth century which saw state formation in the tribal belt of Central India.

The development in the sculpture and ornaments from Tamil urban centres provides a means of documenting the gradual increase in the prosperity of these urban establishments. In addition to its accepted usefulness in solving problems relating to chronology, settlement patterns, the layout of habitation areas, proliferation in crafts and changes in the modes of their

production, archaeology can also aid in documenting social change, for instance at sites which show a transistion from the Megalithic to the Early Historical period..

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